

FILE J:\2016\161019 Sand Point Dock Replacement\G. Drawings\Civil\01 Cover Sheet.dwg DATE 1/14/2019 10:31 LAYOUT 01 DESIGNED JDO CHECKED STAFF DRAFTED JDO

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

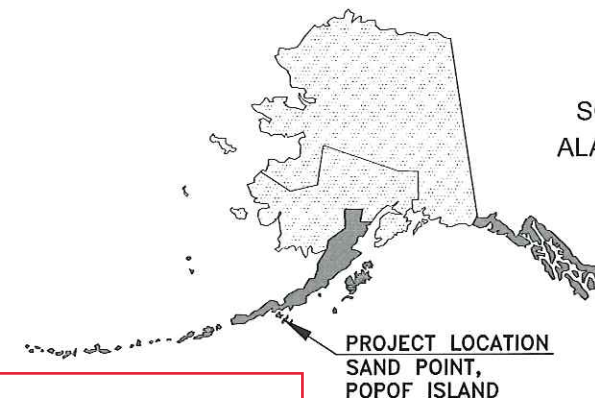
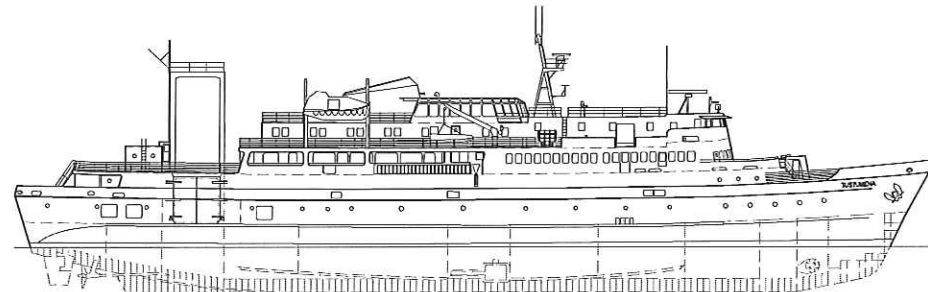
PROPOSED MARINE PROJECT SAND POINT DOCK REPLACEMENT PROJECT #: SFHWY00006/0003194

The undersigned hereby
certifies that this duplicated
document is an exact and
true copy of the original.

Jessica Puskala

May 07, 2019

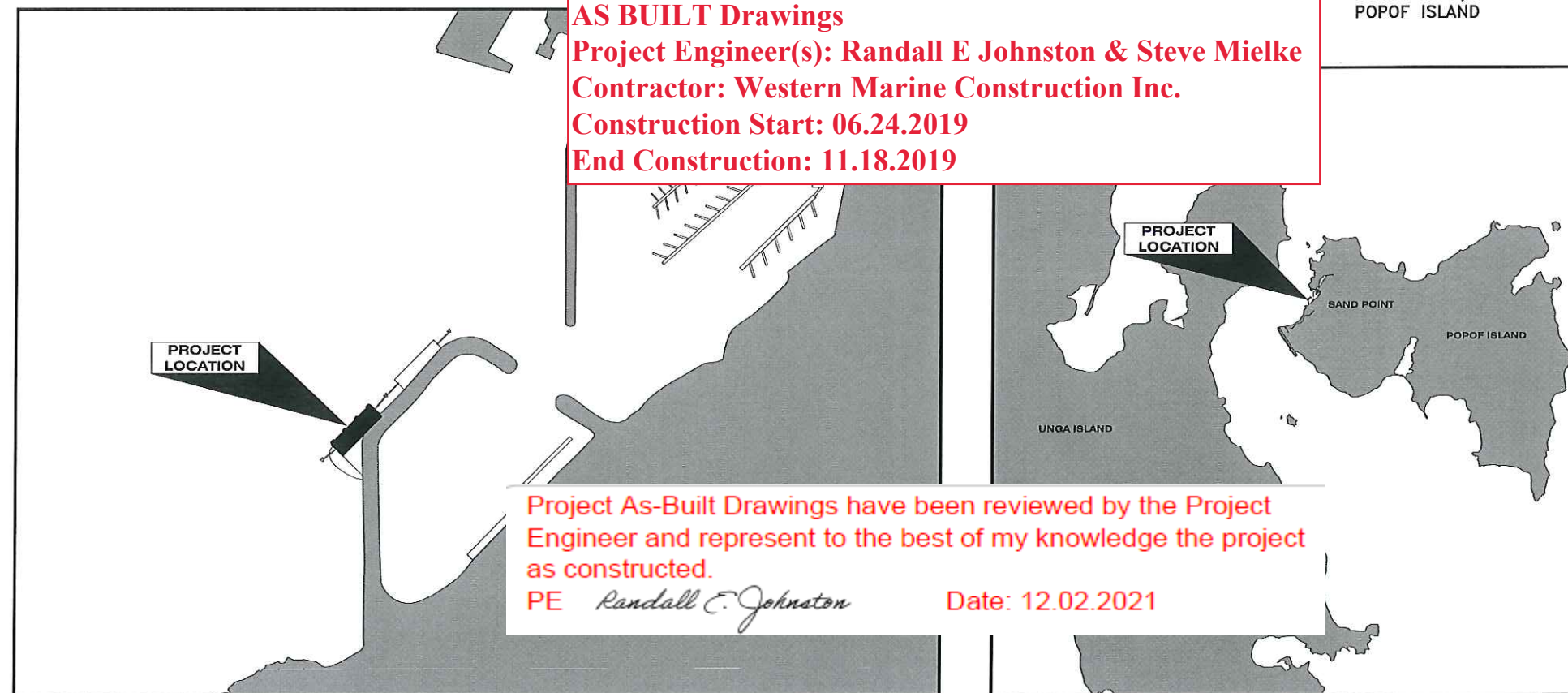
TIDAL DATA	
MHHW	+7.23'
MHW	+6.52'
MLW	+1.33'
MLLW	0.0'



SOUTHCOAST
ALASKA REGION

PROJECT LOCATION
SAND POINT,
POPOF ISLAND

AS BUILT Drawings
Project Engineer(s): Randall E Johnston & Steve Mielke
Contractor: Western Marine Construction Inc.
Construction Start: 06.24.2019
End Construction: 11.18.2019



PROJECT
LOCATION

PROJECT
LOCATION

Project As-Built Drawings have been reviewed by the Project
Engineer and represent to the best of my knowledge the project
as constructed.

PE *Randall E Johnston*

Date: 12.02.2021

SITE MAP

VICINITY MAP

PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
AK LIC# AECC250

USE THESE PLANS IN CONJUNCTION WITH THE STATE OF ALASKA
STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2017
EDITION AND THE PROJECT SPECIAL PROVISIONS.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763

APPROVED: *Pat Carroll* 2.7.19
REGIONAL PRECONSTRUCTION ENGINEER DATE
L. PAT CARROLL, P.E.

CONCUR: *Shirley Mearig* 07 Feb 2019
REGIONAL DIRECTOR DATE
D. LANCE MEARIG, P.E.

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10	DOCK LAYOUT
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12	PILE SCHEDULE
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E06	EQUIP LIST AND PANEL SCHEDULE
E07	GENERATOR SCHEMATICS
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A01	PILE CAP & SACRIFICIAL ANODE LAYOUT
A02	PILE PROFILE & ANODE SCHEDULE
A03	FENDER, DOLPHIN, & ROW A DETAILS
A04	ANODE CONNECTION DETAILS

FILE J:\2016\161019 Sand Point Dock Replacement\G. Drawings\Civil\02 General Notes & Specifications\DWG 11/20/2018 10:45 LAYOUT 02 DESIGNED XXX CHECKED XXX DRAFTED XXX XXX

GENERAL NOTES:

ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, SPECIFICATIONS, SITE CONDITIONS, AND THESE NOTES SHALL BE REPORTED TO THE ENGINEER AT ONCE. ANY FURTHER WORK DONE BY THE CONTRACTOR AFTER FINDING SUCH DISCREPANCIES SHALL BE DONE AT HIS OWN RISK.

APPLICABLE CODES –
ALL LOCAL CODES PLUS THE FOLLOWING SPECIFICATIONS, STANDARDS AND CODES ARE PART OF THESE GENERAL NOTES:

1. ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES (ADOT&PF) STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION
2. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 7TH EDITION (2014)
3. INTERNATIONAL BUILDING CODE, CURRENT EDITION
4. AWS D1.1 STRUCTURAL WELDING CODE, CURRENT EDITION
5. ACI 318, 301, 306
6. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION, 14TH EDITION
7. ASTM SPECIFICATIONS
8. ASCE 61–14, "SEISMIC DESIGN OF PIERS AND WHARVES"

STRUCTURAL DESIGN CRITERIA –
DOCK DESIGN LIFE – 50 YEARS
UNIFORM LIVE LOAD – 400 PSF
DESIGN VEHICLES – AASHTO STRENGTH I
AASHTO HL93
AASHTO HS25
AASHTO STRENGTH II
TRUCK CRANE OUTRIGGERS (SEE DIAGRAM)
HYSTER CHALLENGER MODEL H700F (SEE DIAGRAM)

SEISMIC – SEISMIC DESIGN CONFORMS TO ASCE 61–14 "SEISMIC DESIGN OF PIERS AND WHARVES," USING DISPLACEMENT BASED DESIGN FOR STRUCTURAL PERFORMANCE.
DESIGN CLASSIFICATION: MODERATE
SITE CLASS: D
CONTINGENCY LEVEL EARTHQUAKE (CLE)
PGA = 0.272g (SITE CLASS B)
S_s = 0.616g
S_i = 0.215g
DESIGN EARTHQUAKE (DE)
PGA = 0.615g (SITE CLASS B)
S_s = 1.377g
S_i = 0.521g

WIND LOAD –
165 MPH 3–SEC GUST, ASCE 7–10, EXPOSURE D

BOLLARDS –
LINE PULL IN ANY HORIZONTAL DIRECTION BASED ON BOLLARD
SAFE WORKING (SWL) PROVIDED BY MANUFACTURER

DESIGN VESSELS & BERTHING VELOCITY –
M/V TUSTUMENA (3,067 LONG TON DISPLACEMENT) @ 0.88 FT/SEC
M/V KENNICOTT (7,503 LONG TON DISPLACEMENT) @ 0.68 FT/SEC
M/V TUSTUMENA REPLACEMENT VESSEL @ 0.74 FT/SEC
(5,595 LONG TON DISPLACEMENT)

TIDE LEVELS –
ELEVATION DATUM FOR THIS PROJECT IS MEAN LOWER LOW WATER (MLLW = 0.0').

NOAA TIDAL DATUM FOR 1983–2001 TIDAL EPOCH AT SAND POINT, POPOF ISLAND ALASKA (STATION ID# 9459450). PUBLICATION DATE: 10/06/2011

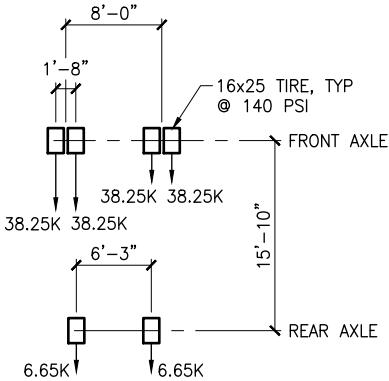
HIGHEST OBSERVED +11.58 FT
MEAN HIGHER HIGH WATER (MHHW) +7.23 FT
MEAN HIGH WATER (MHW) +6.52 FT
MEAN TIDE LEVEL (MTL) +3.93 FT
MEAN SEA LEVEL (MSL) +3.87 FT
MEAN LOW WATER (MLW) +1.33 FT
MEAN LOWER LOW WATER (MLLW) 0.0 FT
LOWEST OBSERVED –3.82 FT

SURVEY –
ALL CONSTRUCTION SURVEYS SHALL BE PERFORMED BY OR UNDER THE DIRECT SUPERVISION OF A SURVEYOR LICENSED IN THE STATE OF ALASKA.

THE CONTRACTOR SHALL VERIFY THE PROVIDED PROJECT HORIZONTAL AND VERTICAL CONTROL. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES IN THE PROVIDED

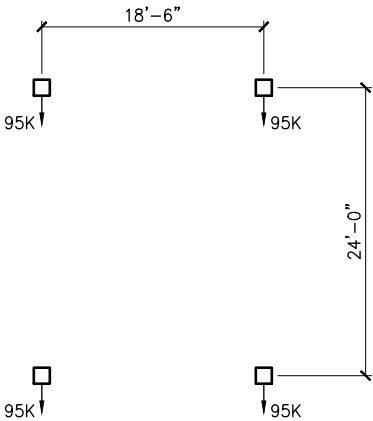
PROJECT CONTROL POINTS. SITE SPECIFIC CONTROL SHALL BE PROVIDED BY THE CONTRACTOR AS NECESSARY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL HORIZONTAL AND VERTICAL CONTROL.

THE CONTRACTOR SHALL FURNISH AT ITS OWN EXPENSE ALL STAKES, TEMPLATES, PLATFORMS, EQUIPMENT, RANGE MARKERS, AND LABOR AS MAY BE REQUIRED TO LAY OUT THE WORK FROM THE CONTROL POINTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN THE CONTROL POINTS UNTIL AUTHORIZED TO REMOVE THEM. IF SUCH POINTS ARE DESTROYED OR DISTURBED THEY SHALL BE REESTABLISHED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.



HYSTER H 700F

NTS



TRUCK CRANE OUTRIGGERS

NTS

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

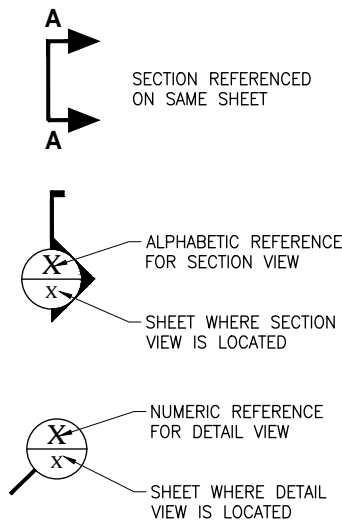
PE *Randall E. Johnston*

Date: 12.02.2021

ABBREVIATIONS

AC – ASPHALT CONCRETE
ADOT – ALASKA DEPARTMENT OF TRANSPORTATION
BOP – BOTTOM OF PIPE
BP – BEGIN PROJECT
CL – CENTERLINE
CONN – CONNECTION
CU – COPPER
DIP – DUCTILE IRON PIPE
E – EASTING
EL – ELEVATION
ELEV – ELEVATION
EOP – END OF PROJECT
EXIST – EXISTING
F&I – FURNISH AND INSTALL
G.V. – GATE VALVE
HORZ – HORIZONTAL
HTL – HIGH TIDE LEVEL
ID – INSIDE DIAMETER
INV – INVERT
L – LENGTH OF CURVE
LF – LINEAR FEET
MAX – MAXIMUM
MH – MAN HOLE
MHW – MEAN HIGH WATER
MIN – MINIMUM
MLLW – MEAN LOWER LOW WATER
N – NORTH, NORTHING
NIC – NOT IN CONTRACT
NFS – NON-FROST SUSCEPTIBLE
NTS – NOT TO SCALE
NWT – NO WATER TABLE
OC – ON CENTER
OD – OUTSIDE DIAMETER
PC – POINT OF CURVATURE
PI STA – POINT OF INFLECTION STATION
PT – POINT OF TANGENT
PVI STA – POINT OF VERTICAL INFLECTION STATION
QAR – QUARRY ACCESS ROAD
R – RADIUS OF CURVATURE
ROW – RIGHT OF WAY
REQ'D – REQUIRED
R/W – RIGHT OF WAY
SMD – SETTLEMENT MONITORING DEVICE
SSMH – SANITARY SEWER MANHOLE
STA – STATION
T – TANGENT LENGTH
t – THICKNESS
T.O. – TOP OF
TP – TEST PIT
TYP – TYPICAL
UNO – UNLESS NOTED OTHERWISE
USACE – UNITED STATES ARMY CORPS OF ENGINEERS
V – VALVE
VB – VALVE BOX
VC – VERTICAL CURVE
VERT – VERTICAL

LEGEND



PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
AK. LIC# AECC250



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763

SAND POINT DOCK REPLACEMENT

GENERAL NOTES &
SPECIFICATIONS

11/23/18

J:\2016\161019 Sand Point Dock Replacement\G. Drawings\Civil\03 Estimate of Quantities.dwg, 03, 2/15/2019 10:31:35 AM, James, 1:2

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
				SFHWHY00006	2018	03	53

ESTIMATE OF QUANTITIES						ACTUAL	BASIS OF ESTIMATES			ACTUAL
ITEM NO.	PAY ITEM	SSHC 2017 ITEM NO.	SSHC 2017 ITEM DESCRIPTION	UNIT	QUANTITY		ITEM NO.	ITEM	ESTIMATING FACTOR	
							611(1)	ARMOR ROCK CLASS A	2,000 CY/LUMP SUM	
301.0004.00E1	AGGREGATE SURFACE COURSE, GRADING E-1	301(4)	AGGREGATE SURFACE COURSE, GRADING E-1	CUBIC YARD	650	552.50	611(2)	ARMOR ROCK CLASS B	1,500 CY/LUMP SUM	
							611(3)	ARMOR ROCK SALVAGED CLASS A	3,500 CY/LUMP SUM	
304.0002.000A	SUBBASE, GRADING A	304(2)	SUBBASE, GRADING A	CUBIC YARD	1300	1105.00	611(4)	ARMOR ROCK SALVAGED CLASS B	1,250 CY/LUMP SUM	
							611(5)	CORE ROCK	10,000 CY/LUMP SUM	16,345
501.0009.0000	CLASS DS CONCRETE	501(8)	DS CONCRETE	LINEAR FOOT	2,886	2885.61				
501.MF15.0001	DOCK STRUCTURE	501(9)	CONCRETE DOCK STRUCTURE	LUMP SUM	ALL REQ'D					
501.MF95.0001	MISCELLANEOUS - CONCRETE CLEAT REPAIR	501(10)	MISCELLANEOUS - CONCRETE CLEAT REPAIR	LUMP SUM	ALL REQ'D					
501.MF95.0002	MISCELLANEOUS - LIFE RINGS & FIRE EXTINGUISHERS	501(11)	MISCELLANEOUS - LIFE RINGS & FIRE EXTINGUISHERS	LUMP SUM	ALL REQ'D					
504.MF15.0001	DOCK - STRUCTURAL STEEL	504(1a)	STRUCTURAL STEEL (DOCK)	LUMP SUM	ALL REQ'D					
504.MF70.0001	DOLPHIN CAP - STRUCTURAL STEEL	504(1b)	STRUCTURAL STEEL (DOLPHIN CAP)	LUMP SUM	ALL REQ'D					
504.MF80.0001	FENDER SYSTEM - DOCK	504(2)	DOCK FENDER SYSTEM	LUMP SUM	ALL REQ'D					
505.MF01.2404	PILE, FURNISHED 24"x0.500"	505(5a)	FURNISH STRUCTURAL STEEL PILES (24"x0.500")	LINEAR FOOT	1,560	1560.00				
505.MF01.3004	PILE, FURNISHED 30"x0.500"	505(5b)	FURNISH STRUCTURAL STEEL PILES (30"x0.500")	LINEAR FOOT	6,370	6370.00				
505.MF02.2404	PILE, DRIVEN 24"x0.500" - DOLPHIN PILE	505(6a)	DRIVE STRUCTURAL STEEL PILES (24"x0.500") - DOLPHIN PILE	EACH	3	3				
505.MF02.2404	PILE, DRIVEN 24"x0.500" - FENDER PIN PILE	505(6b)	DRIVE STRUCTURAL STEEL PILES (24"x0.500") - FENDER PIN PILE	EACH	10	10				
505.MF02.3004	PILE, DRIVEN 30"x0.500"	505(6c)	DRIVE STRUCTURAL STEEL PILES (30"x0.500")	EACH	52	52				
505.MF95.0021	MISCELLANEOUS - FIN PILE TIPS	505(10)	FIN PILE TIPS	EACH	3	3				
514.MF01.0001	CATHODIC PROTECTION - PILE ANODES	514(1)	PILE ANODES	LUMP SUM	ALL REQ'D					
611.2007.0000	ARMOR ROCK - CLASS A	611(1)	CLASS A ARMOR ROCK	LUMP SUM	ALL REQ'D					
611.2007.0000	ARMOR ROCK - CLASS B	611(2)	CLASS B ARMOR ROCK	LUMP SUM	ALL REQ'D					
611.2007.0000	ARMOR ROCK - SALVAGED CLASS A	611(3)	SALVAGED CLASS A ARMOR ROCK	LUMP SUM	ALL REQ'D					
611.2007.0000	ARMOR ROCK - SALVAGED CLASS B	611(4)	SALVAGED CLASS B ARMOR ROCK	LUMP SUM	ALL REQ'D					
611.2008.0000	CORE ROCK	611(5)	CORE ROCK	LUMP SUM	ALL REQ'D					
615.MF01.0001	STANDARD SIGN	615(7)	SIGNS	LUMP SUM	ALL REQ'D					
640.0001.0000	MOBILIZATION AND DEMOBILIZATION	640(1)	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQ'D					
640.0004.0000	WORKER MEALS AND LODGING, OR PER DIEM	640(4)	WORKER MEALS AND LODGING, OR PER DIEM	LUMP SUM	ALL REQ'D					
641.0001.0000	EROSION, SEDIMENT AND POLLUTION CONTROL ADMINISTRATION	641(1)	EROSION, SEDIMENT AND POLLUTION CONTROL ADMINISTRATION	LUMP SUM	ALL REQ'D					
641.0003.0000	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL	641(3)	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL	LUMP SUM	ALL REQ'D					
641.0005.0000	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL BY DIRECTIVE	641(5)	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL BY DIRECTIVE	CONTINGENT SUM	ALL REQ'D					
641.0006.0000	WITHHOLDING	641(6)	WITHHOLDING	CONTINGENT SUM	ALL REQ'D					
643.0002.0000	TRAFFIC MAINTENANCE	643(2)	TRAFFIC MAINTENANCE	LUMP SUM	ALL REQ'D					
643.0025.0000	TRAFFIC CONTROL	643(25)	TRAFFIC CONTROL	CONTINGENT SUM	ALL REQ'D					
644.0001.0000	FIELD OFFICE	644(1)	FIELD OFFICE	LUMP SUM	ALL REQ'D					
644.0006.0000	VEHICLE(S)	644(6)	VEHICLE	LUMP SUM	ALL REQ'D					
645.0001.0000	TRAINING PROGRAM, 1 TRAINEE/APPRENTICE	645(1)	TRAINING PROGRAM	LABOR HOUR	500					
654.MF01.0001	MARINE MAMMAL MONITORING & EIDER OBSERVATION	647(1)	PROTECTED SPECIES OBSERVATION	LUMP SUM	ALL REQ'D					
662.MF01.0001	ELECTRICAL - UPLANDS	662(1)	ELECTRICAL SYSTEM (UPLANDS)	LUMP SUM	ALL REQ'D					
662.MF01.0002	ELECTRICAL - MARINE	662(2)	ELECTRICAL SYSTEM (MARINE)	LUMP SUM	ALL REQ'D					
695.MF20.0001	GENERATOR BUILDING	695(1)	GENERATOR BUILDING	LUMP SUM	ALL REQ'D	DELETED				

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021

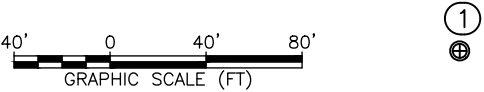
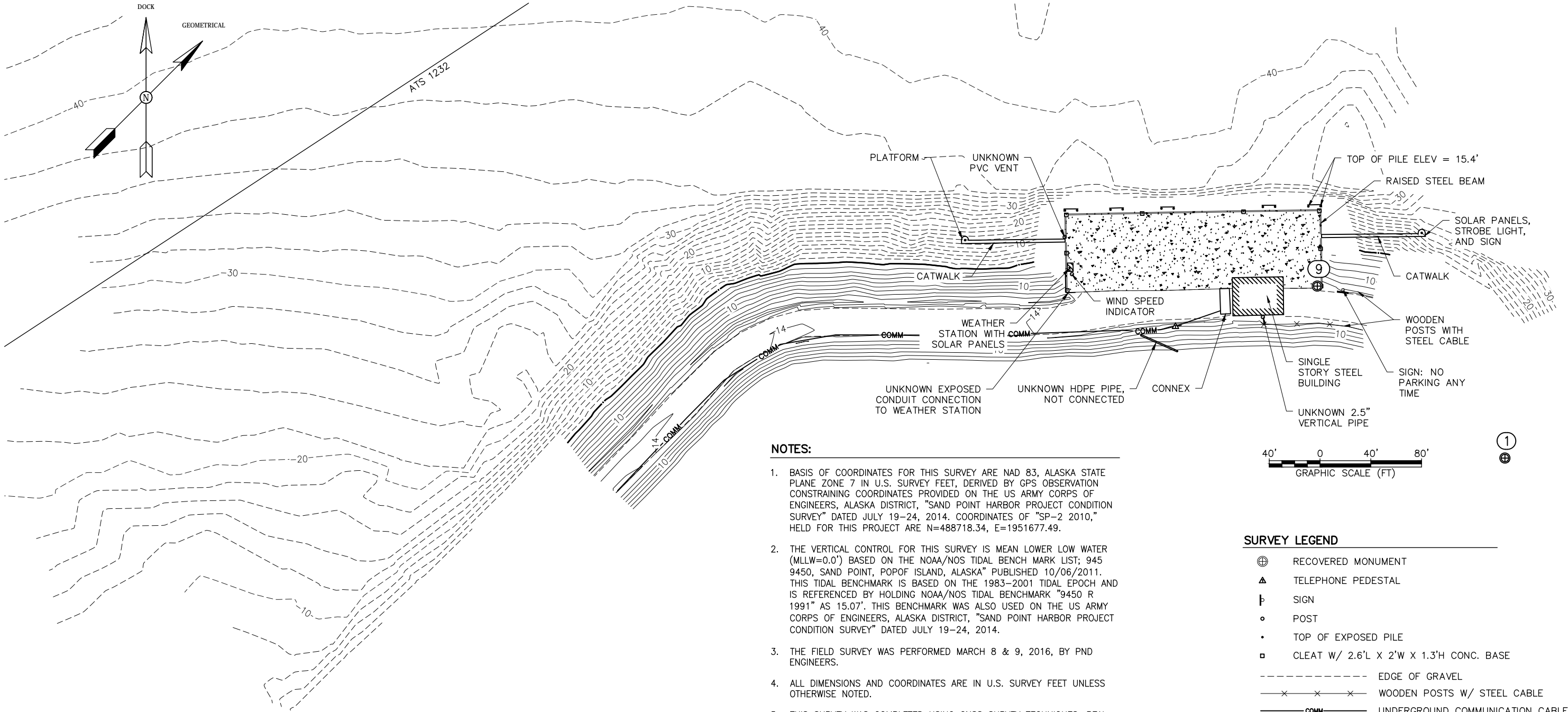
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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
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6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763
SAND POINT DOCK REPLACEMENT
ESTIMATE OF QUANTITIES

FILE J:\2016\161019 Sand Point Dock Replacement\G. Drawings\Civil\04 Survey and Project Control.dwgDATE 11/20/2018 10:51 LAYOUT 04 DRAFTED XXX CHECKED XXX DESIGNED XXX

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFHWHY00006	2018	04	53



NOTES:

1. BASIS OF COORDINATES FOR THIS SURVEY ARE NAD 83, ALASKA STATE PLANE ZONE 7 IN U.S. SURVEY FEET, DERIVED BY GPS OBSERVATION CONSTRAINING COORDINATES PROVIDED ON THE US ARMY CORPS OF ENGINEERS, ALASKA DISTRICT, "SAND POINT HARBOR PROJECT CONDITION SURVEY" DATED JULY 19-24, 2014. COORDINATES OF "SP-2 2010," HELD FOR THIS PROJECT ARE N=488718.34, E=1951677.49.
2. THE VERTICAL CONTROL FOR THIS SURVEY IS MEAN LOWER LOW WATER (MLLW=0.0') BASED ON THE NOAA/NOS TIDAL BENCH MARK LIST; 945 9450, SAND POINT, POPOF ISLAND, ALASKA" PUBLISHED 10/06/2011. THIS TIDAL BENCHMARK IS BASED ON THE 1983-2001 TIDAL EPOCH AND IS REFERENCED BY HOLDING NOAA/NOS TIDAL BENCHMARK "9450 R 1991" AS 15.07'. THIS BENCHMARK WAS ALSO USED ON THE US ARMY CORPS OF ENGINEERS, ALASKA DISTRICT, "SAND POINT HARBOR PROJECT CONDITION SURVEY" DATED JULY 19-24, 2014.
3. THE FIELD SURVEY WAS PERFORMED MARCH 8 & 9, 2016, BY PND ENGINEERS.
4. ALL DIMENSIONS AND COORDINATES ARE IN U.S. SURVEY FEET UNLESS OTHERWISE NOTED.
5. THIS SURVEY WAS COMPLETED USING GNSS SURVEY TECHNIQUES. REAL TIME KINEMATIC (RTK) OBSERVATIONS WERE STORED USING TRIMBLE R8 MODEL 4, GNSS RECEIVERS AND POST PROCESSED USING TRIMBLE BUSINESS CENTER v3.40 SOFTWARE. BATHYMETRIC DATA WAS OBTAINED USING AN INTERSPACE 448 ECHOSOUNDER.
6. UTILITY LOCATES WERE SURVEYED WHERE MARKED BY LOCATE COMPANIES. THE ONLY UTILITY LOCATES FOUND WERE PROVIDED BY TELALASKA.
7. CONTOURS ARE IN FEET, WITH TWO FOOT INTERVALS.

SURVEY LEGEND

- ⊕ RECOVERED MONUMENT
- △ TELEPHONE PEDESTAL
- ⌵ SIGN
- POST
- TOP OF EXPOSED PILE
- ▣ CLEAT W/ 2.6'L X 2'W X 1.3'H CONC. BASE
- EDGE OF GRAVEL
- × × × WOODEN POSTS W/ STEEL CABLE
- COMM --- UNDERGROUND COMMUNICATION CABLE
- [Pattern] CONCRETE
- [Pattern] BUILDING

RECOVERED MONUMENTS				
Point #	Northing	Easting	Elevation	Description
1	489768.320	1952169.160	11.69	FD BC[NOAA]; TIDAL BM
8	488718.340	1951677.490	15.29	FD BC[HUGHES & ASSOC]; SP-2 2010
9	489759.564	1951968.833	15.07	FD BC[NOAA]; TIDAL BM 9450S 1991

8 ⊕

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PE *Randall E. Johnston*

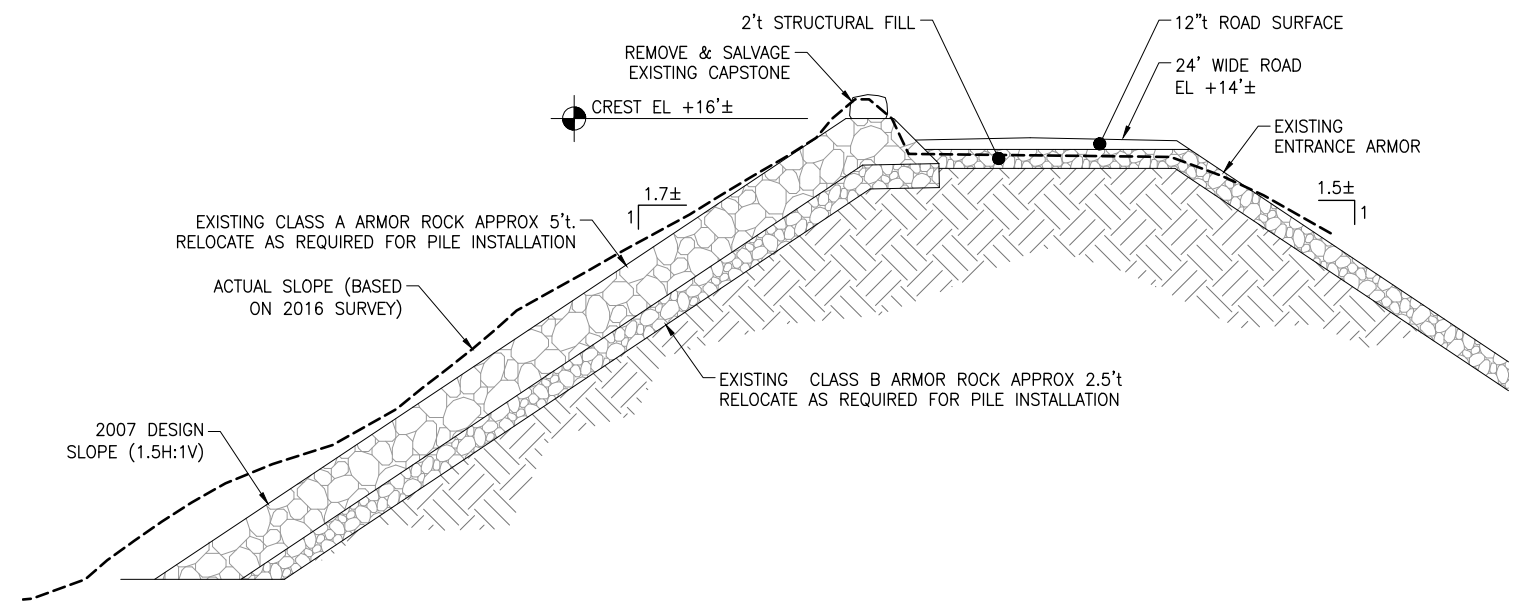
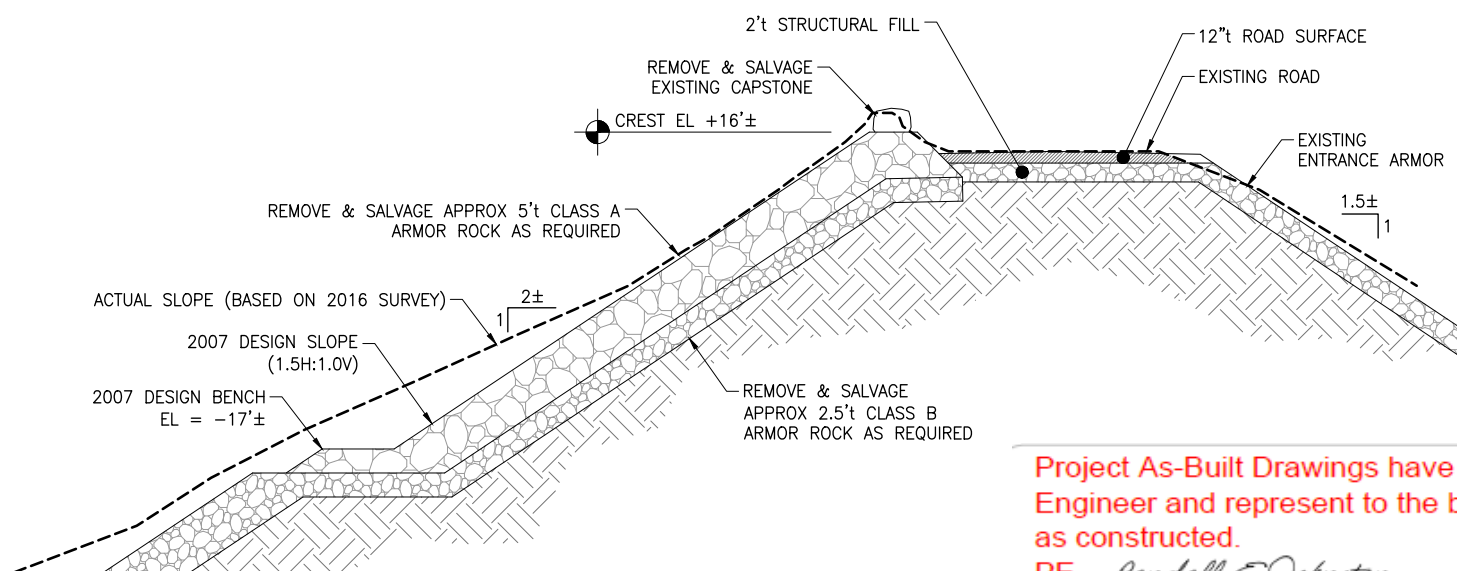
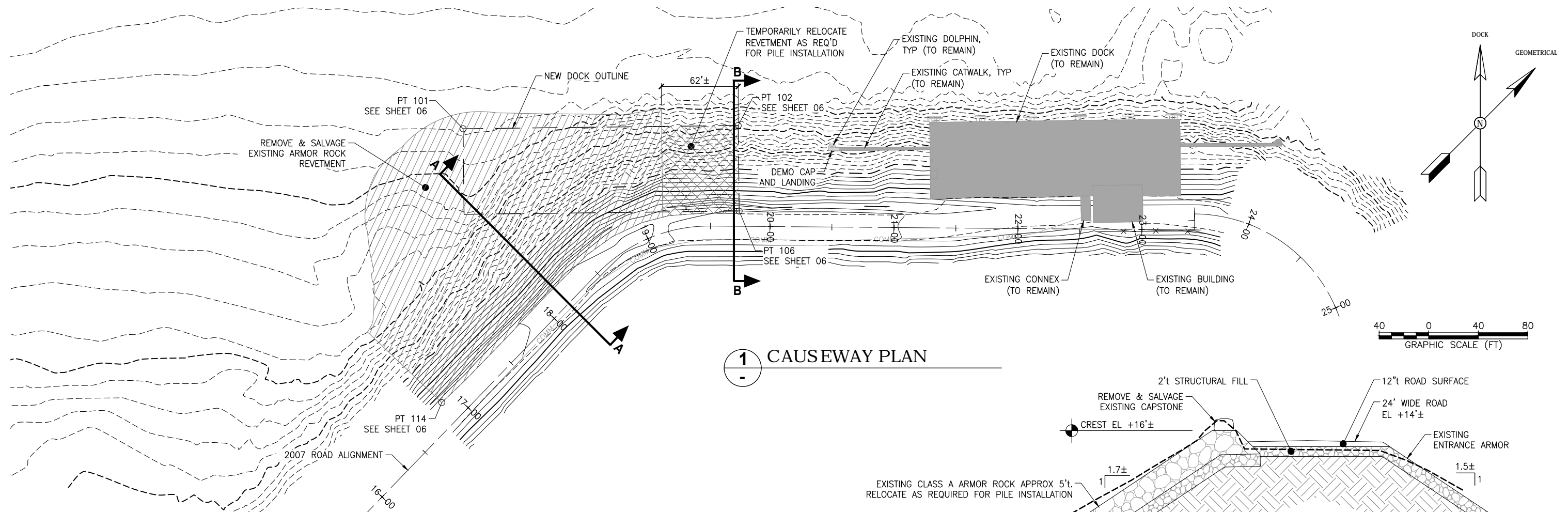
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SAND POINT DOCK REPLACEMENT
SURVEY AND PROJECT CONTROL

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFHWHY00006	2018	05	53



A CAUSEWAY TYPICAL SECTION

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021

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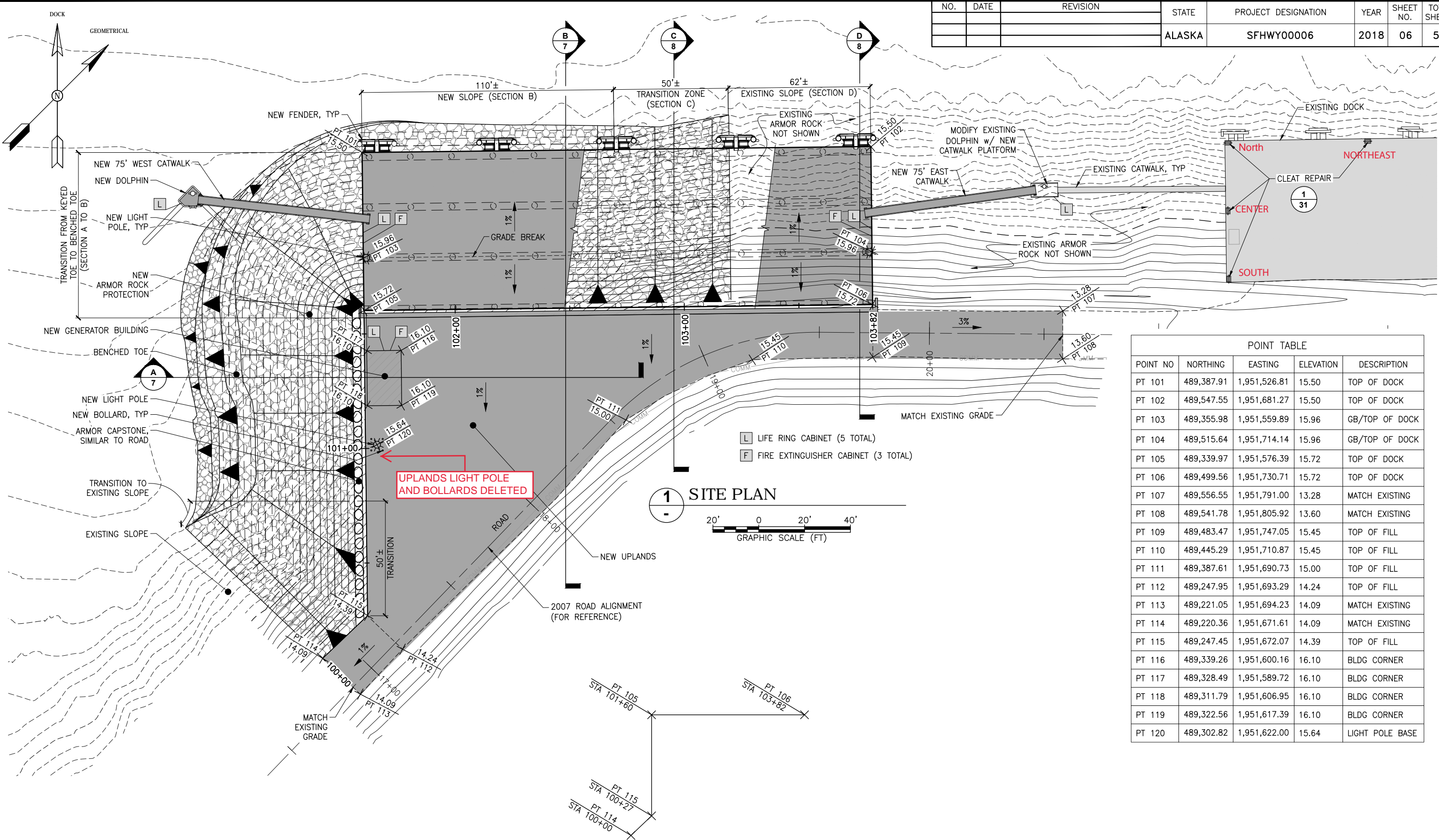
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SAND POINT DOCK REPLACEMENT

EXISTING CONDITIONS & DEMOLITION

FILE J:\2016\161019 Sand Point Dock Replacement\G. Drawings\Civil\106_09 Site Plan.dwg DATE 11/23/2018 8:03 LAYOUT 06 DESIGNED XXX CHECKED XXX DRAFTED XXX

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFHWHY00006	2018	06	53



Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021

2 NEW REFERENCE ALIGNMENT

NOTE:
REFERENCE ALIGNMENT PROVIDED
FOR ARMOR LAYOUT PURPOSES ONLY

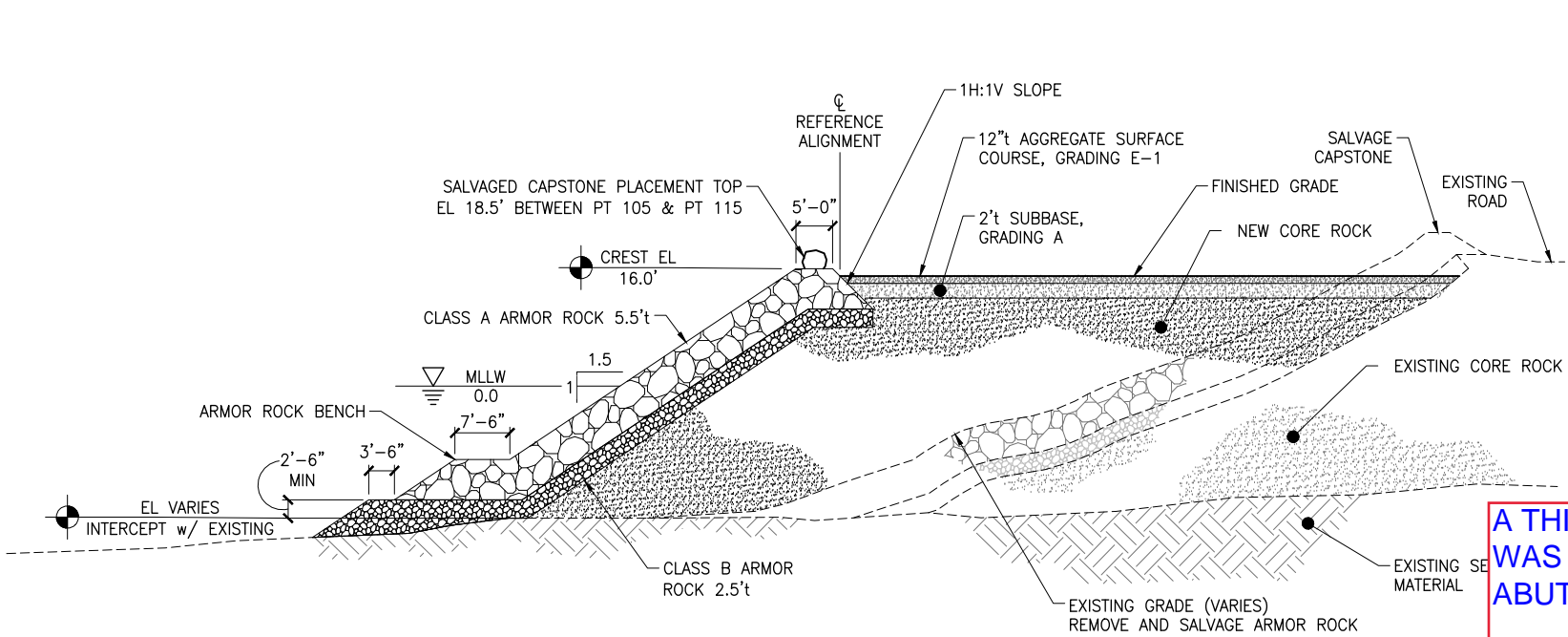
PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
AK. LIC# AECC250



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763
SAND POINT DOCK REPLACEMENT
SITE PLAN

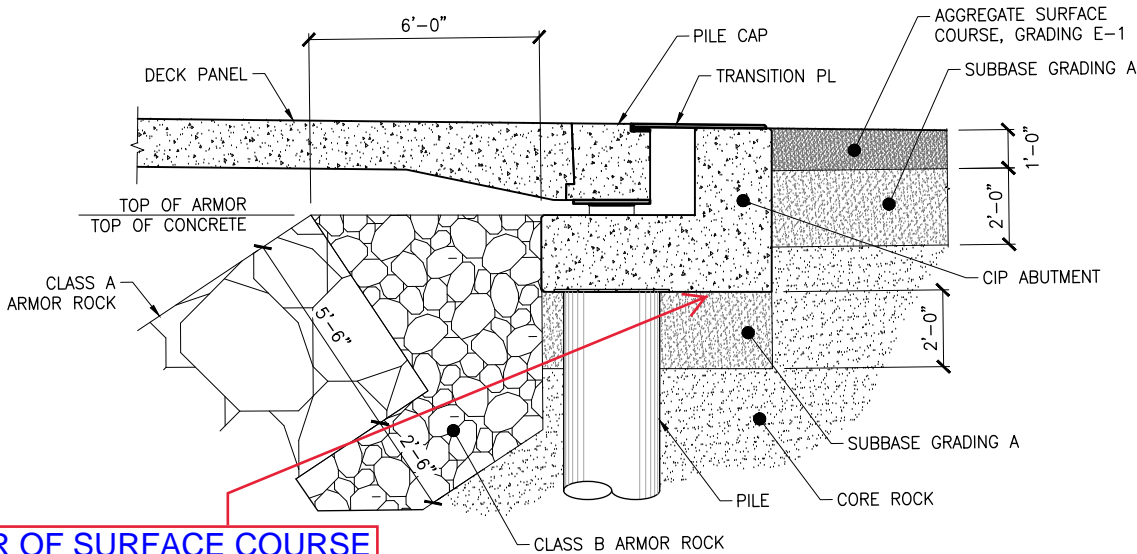
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			ALASKA	SFHWY00006	2018	07	53

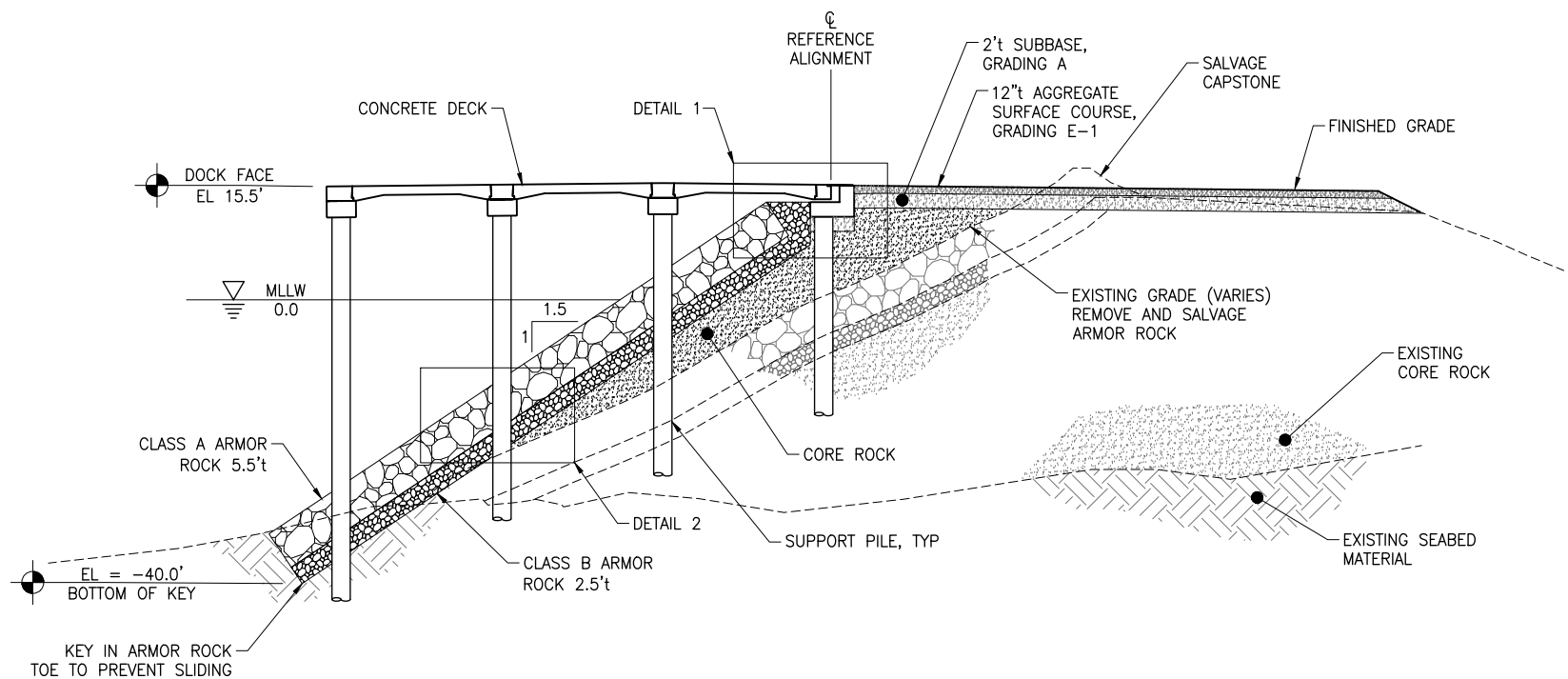


A SECTION
6 STA 100+77 TO 101+60

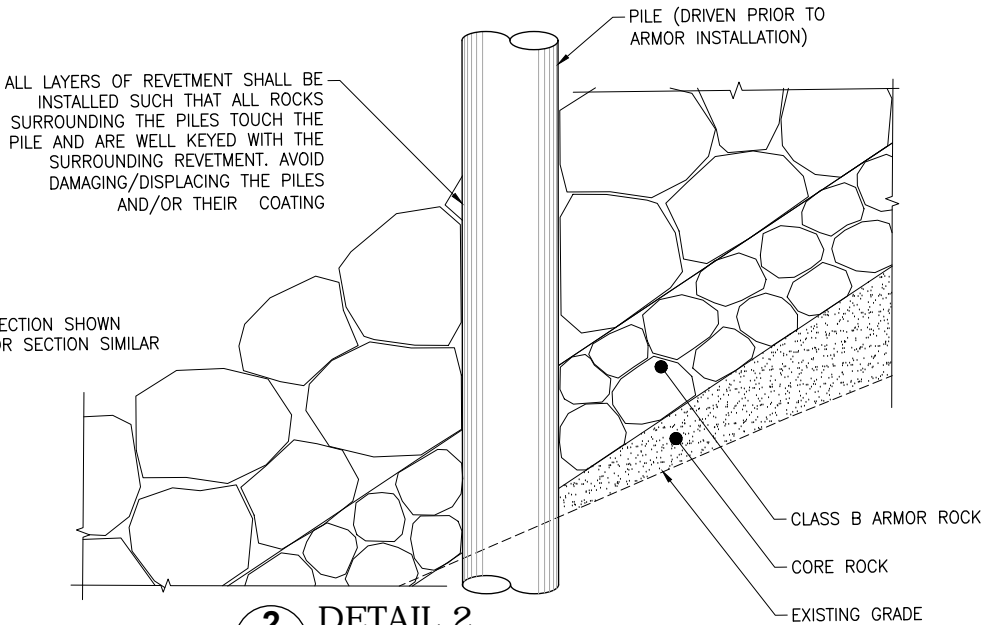
A THIN LAYER OF SURFACE COURSE
WAS PLACED UNDER THE
ABUTMENT.



DETAIL 1



B SECTION
6 STA 101+60 TO 102+70



2
DETAIL 2

NOTE:
NEW ARMOR SECTION SHOWN
EXISTING ARMOR SECTION SIMILAR

ALL LAYERS OF REVETMENT SHALL BE
INSTALLED SUCH THAT ALL ROCKS
SURROUNDING THE PILES TOUCH THE
PILE AND ARE WELL KEYED WITH THE
SURROUNDING REVETMENT. AVOID
DAMAGING/DISPLACING THE PILES
AND/OR THEIR COATING

Project As-Built Drawings have been reviewed by the Project
Engineer and represent to the best of my knowledge the project
as constructed.
PE *Randall E. Johnston* Date: 12.02.2021

PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
AK. LIC# AECC250

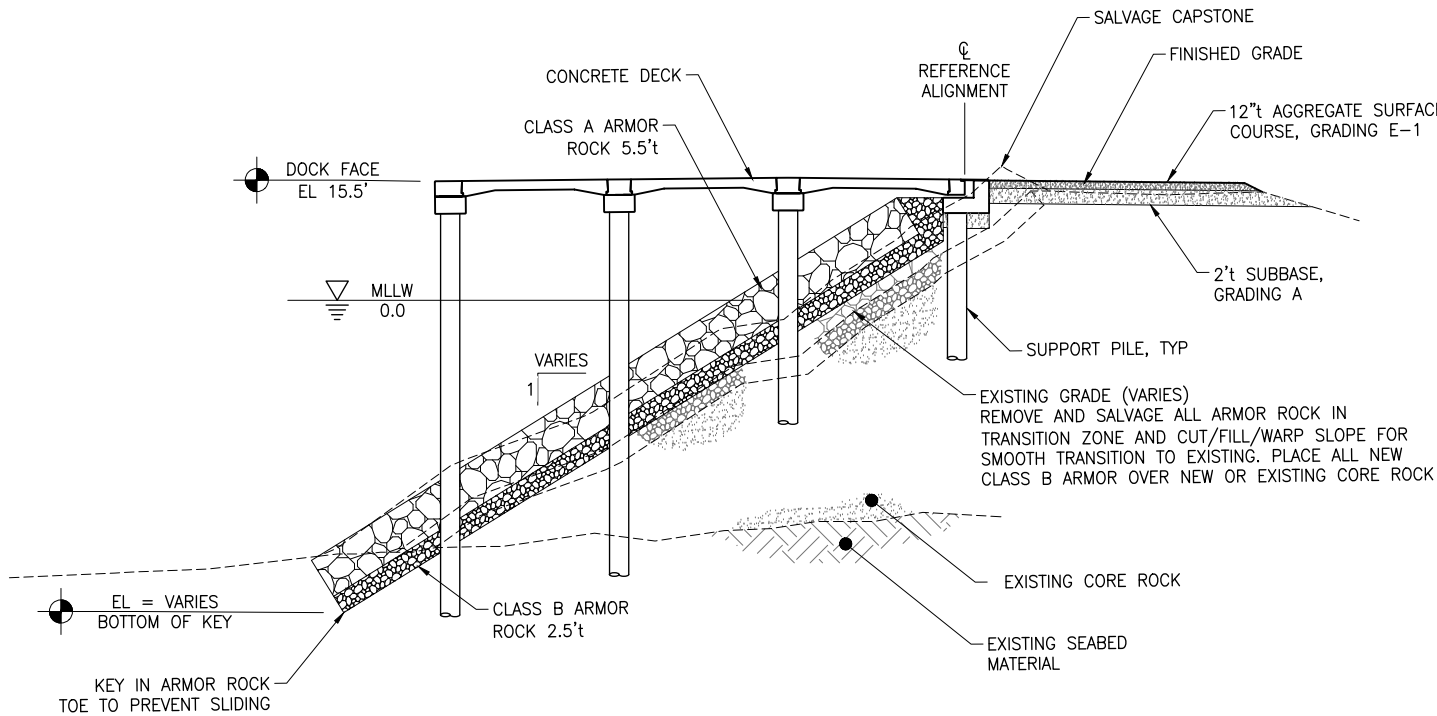
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763

SAND POINT DOCK REPLACEMENT

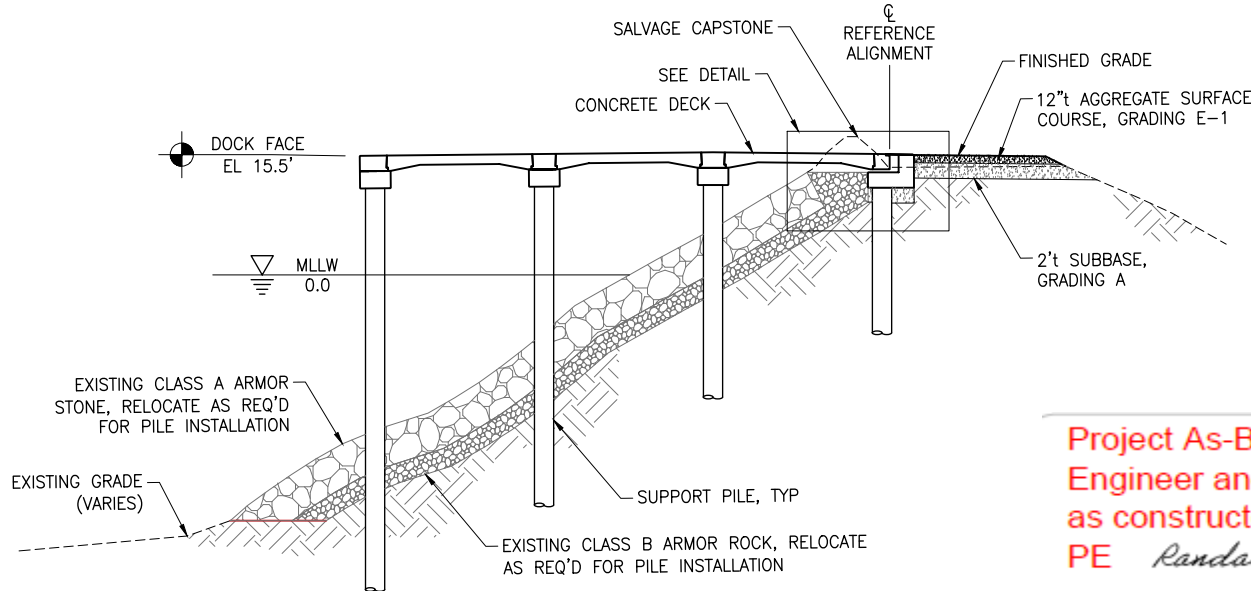
DOCK SECTIONS
(1 OF 2)

FILE J:\2016\161019 Sand Point Dock Replacement\G. Drawings\Civil\06_09 Site Plan.dwg DATE 11/23/2018 8:03 LAYOUT 08 DESIGNED XXX CHECKED XXX DRAFTED XXX

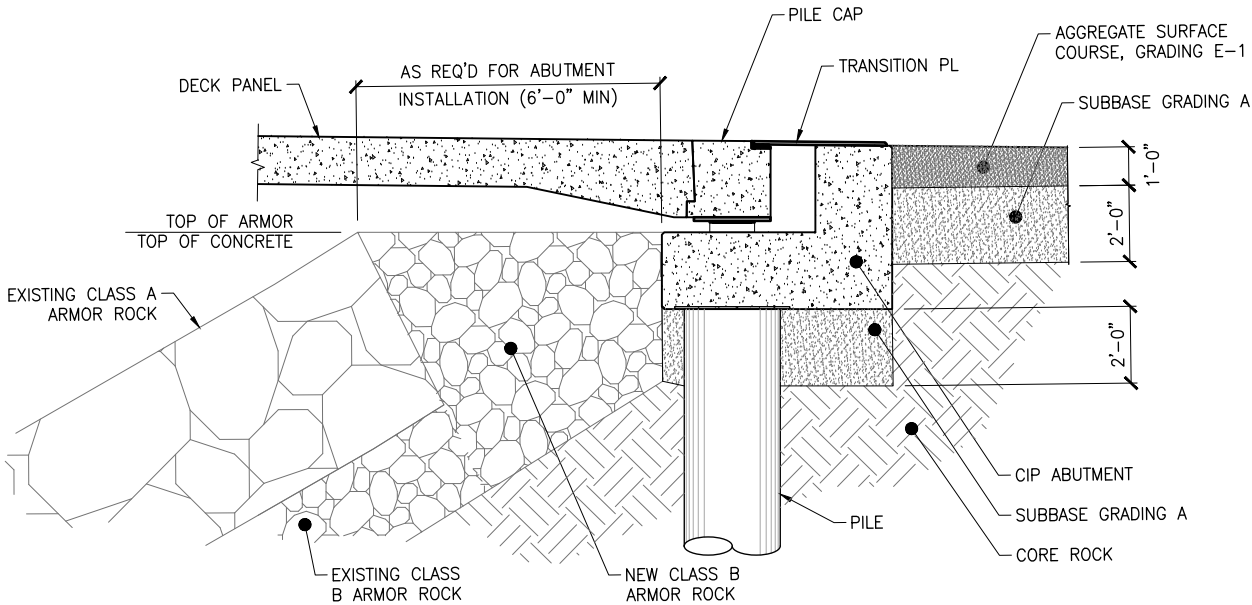
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFHWHY00006	2018	08	53



C
6 SECTION
STA 102+70 TO 103+20



D
6 SECTION
STA 103+20 TO 103+82



D
6 SECTION - DETAIL

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021

PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
AK. LIC# AECC250



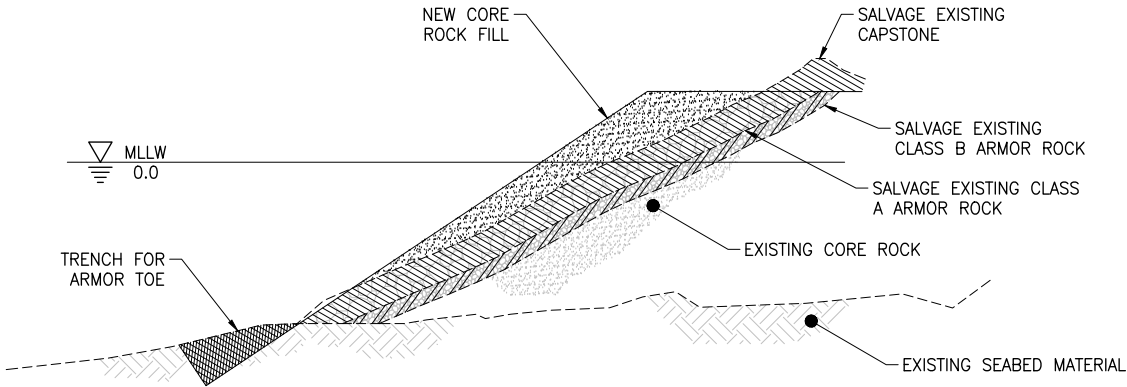
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763

SAND POINT DOCK REPLACEMENT

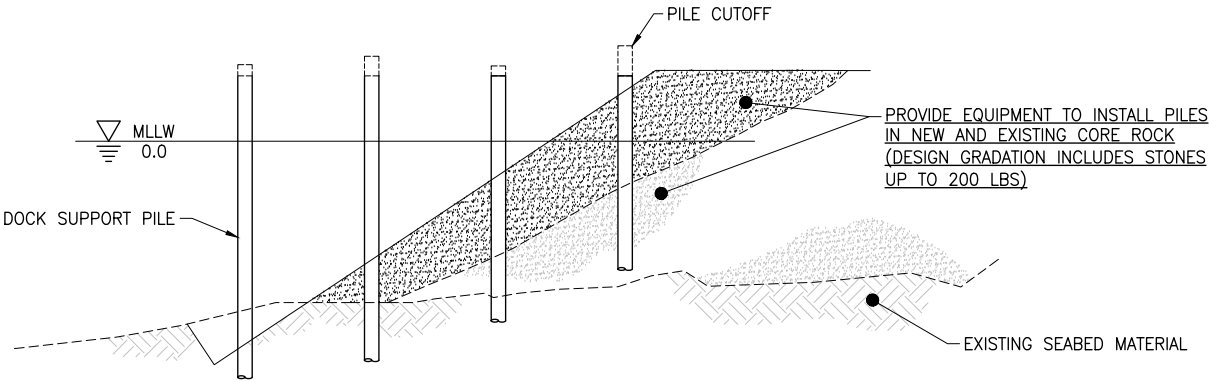
DOCK SECTIONS
(2 OF 2)

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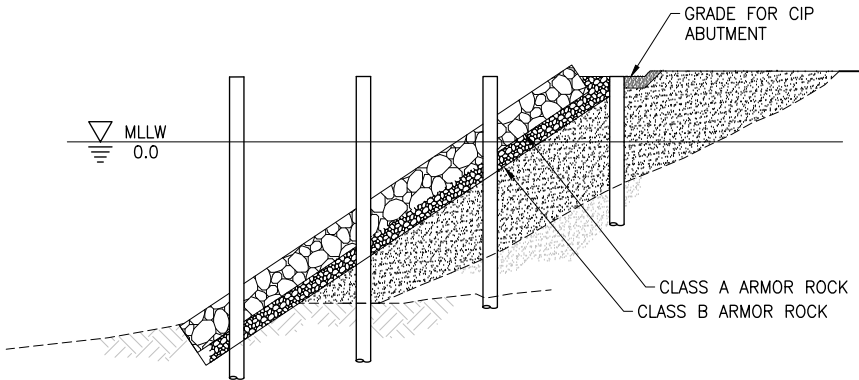
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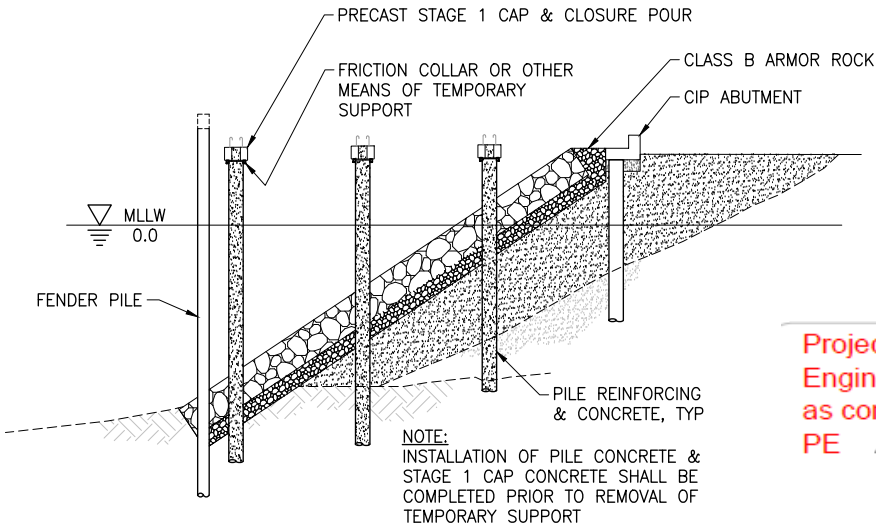
1 CUT/FILL SLOPE & SALVAGE ARMOR



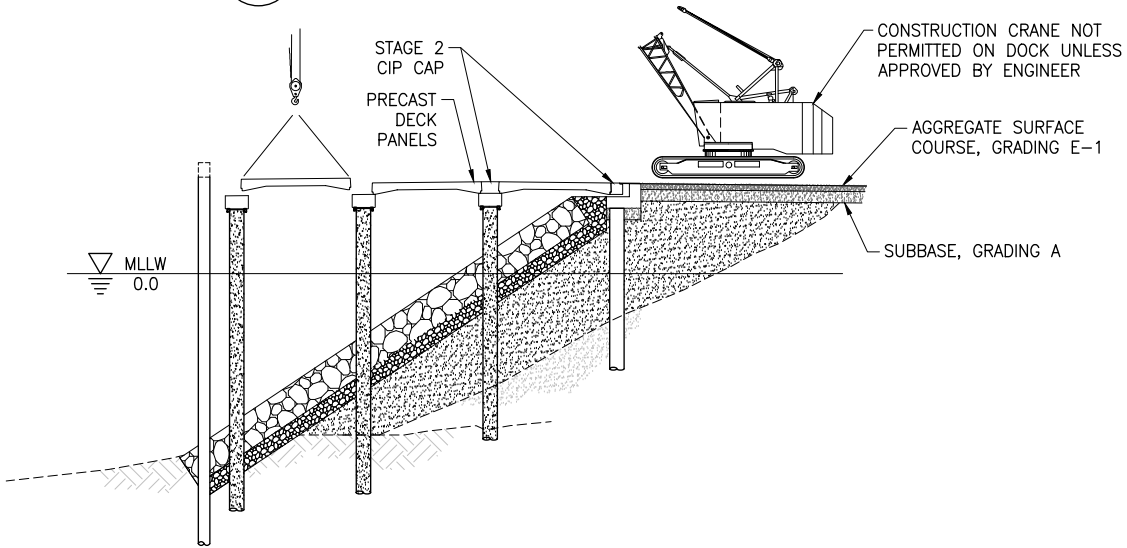
2 DRIVE PILE



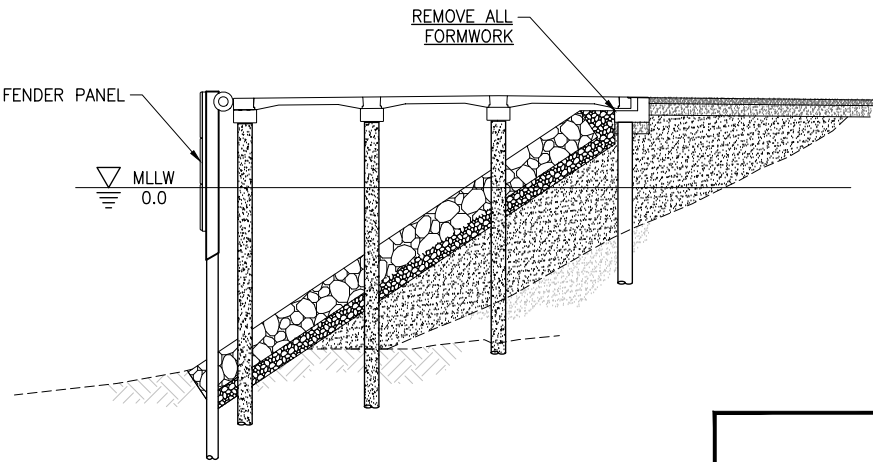
3 PLACE ARMOR & CUTOFF PILE



4 STAGE 1 CAP & PILE CONCRETE



5 DECK PANELS & STAGE 2 CAP



6 FENDERS, BOLLARDS, BULLRAIL

- NOTES:
- CONSTRUCTION SEQUENCE SHOWN IN THIS DRAWING IS FOR ILLUSTRATIVE PURPOSES ONLY
 - ALTERNATIVE SEQUENCING MAY BE PROPOSED BY THE CONTRACTOR

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.
PE *Randall Johnston* Date: 12.02.2021

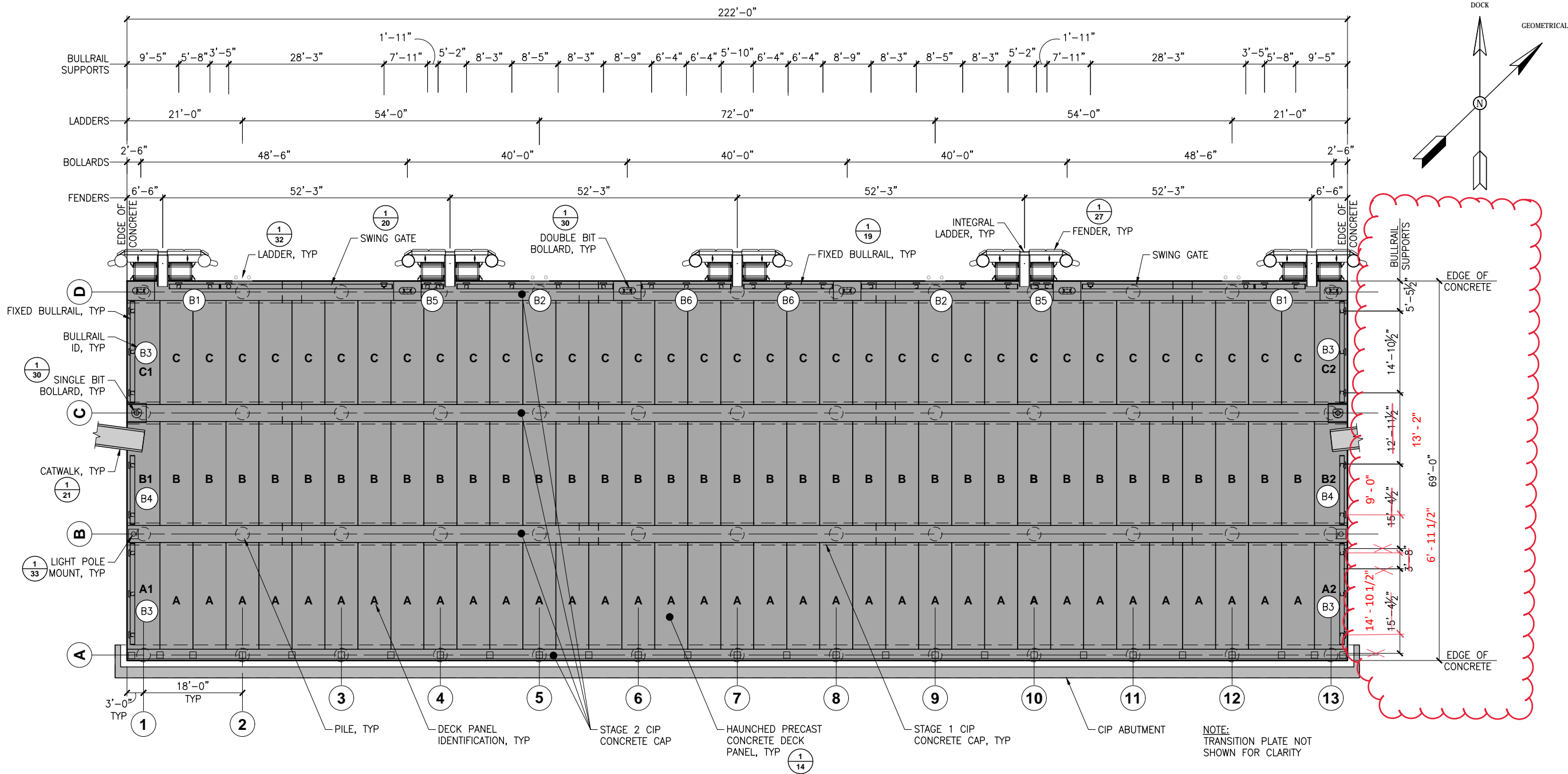
PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
AK. LIC# AECC250



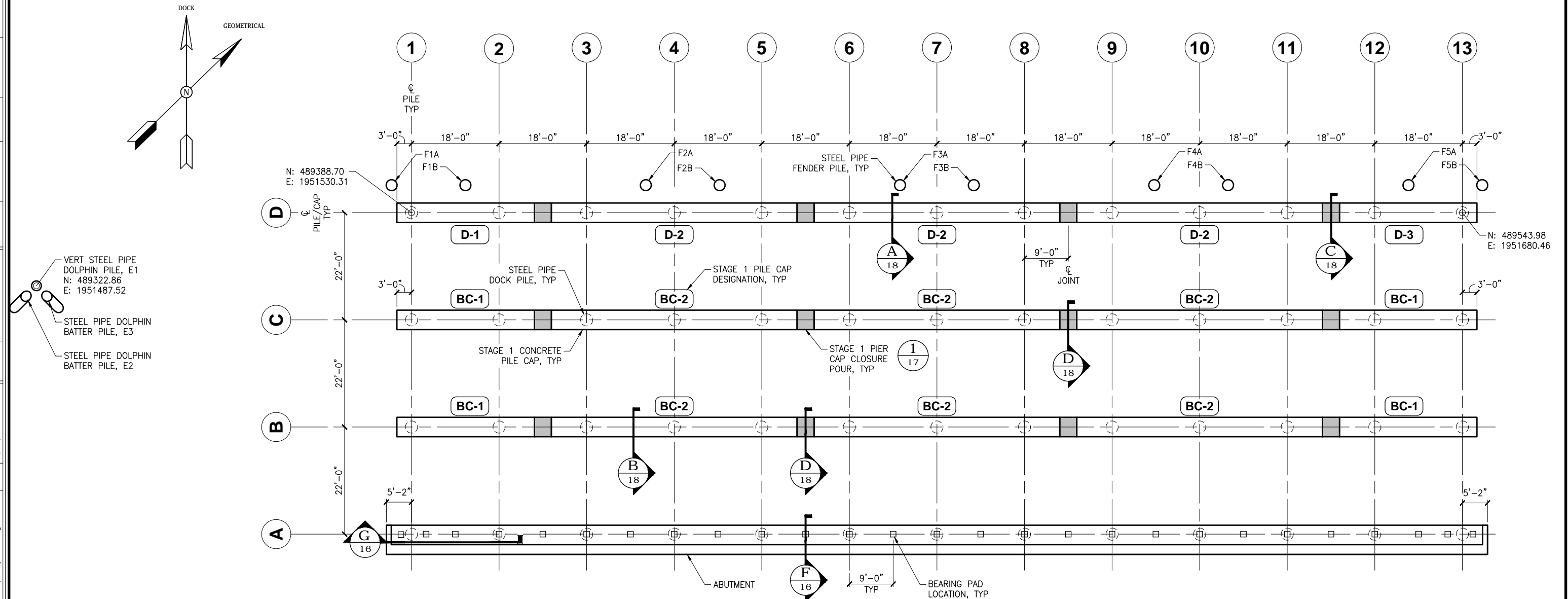
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763
SAND POINT DOCK REPLACEMENT
CONSTRUCTION SEQUENCING

FILE J:\2016\161019 Sand Point Dock Replacement\G. Drawings\Civil\10 Dock Layout.dwg DATE 11/21/2018 10:45 LAYOUT 10 DESIGNED XXX CHECKED XXX DRAFTED XXX

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
				SFHWY00006	2018	10	53



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFHWY00006	2018	11	53



1 PILE & CAP LAYOUT



Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021

PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
AK. LIC# AECC250



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763

SAND POINT DOCK REPLACEMENT

PILE & CAP LAYOUT

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFHWY00006	2018	12	53

Finish Date	PILE SCHEDULE							
	LOCATION	PILE ORIENTATION	PILE TIP	DIAMETER (in.)	THICKNESS (in.)	MINIMUM TIP ELEV (ft.)	MINIMUM SUPPLY LENGTH (ft.)	TOTAL NOMINAL BEARING CAPACITY (KIPS)
7/30/19	A1	VERT	DRIVING SHOE	30	0.50	-100 93.33'	130	400
7/31/19	A2	VERT	DRIVING SHOE	30	0.50	-100 92'	130	400
7/31/19	A3	VERT	DRIVING SHOE	30	0.50	-100 100'	130	400
7/31/19	A4	VERT	DRIVING SHOE	30	0.50	-100 100'	130	400
7/31/19	A5	VERT	DRIVING SHOE	30	0.50	-100 98.5'	130	400
7/31/19	A6	VERT	DRIVING SHOE	30	0.50	-100 98.25'	130	400
7/29/19	A7	VERT	DRIVING SHOE	30	0.50	-100 98'	130	400
7/28/19	A8	VERT	DRIVING SHOE	30	0.50	-100 99.25'	130	400
7/28/19	A9	VERT	DRIVING SHOE	30	0.50	-100 97'	130	400
7/28/19	A10	VERT	DRIVING SHOE	30	0.50	-100 97'	130	400
7/28/19	A11	VERT	DRIVING SHOE	30	0.50	-100 100'	130	400
8/28/19	A12	VERT	DRIVING SHOE	30	0.50	-100 100'	130	400
7/28/19	A13	VERT	DRIVING SHOE	30	0.50	-100 100'	130	400
8/3/19	B1	VERT	DRIVING SHOE	30	0.50	-100 94.75'	120	390
8/3/19	B2	VERT	DRIVING SHOE	30	0.50	-100 94.5'	120	390
8/3/19	B3	VERT	DRIVING SHOE	30	0.50	-100 93.75'	120	390
8/3/19	B4	VERT	DRIVING SHOE	30	0.50	-100 92.75'	120	390
8/3/19	B5	VERT	DRIVING SHOE	30	0.50	-100 96.25'	120	390
8/3/19	B6	VERT	DRIVING SHOE	30	0.50	-100 95.25'	120	390
8/2/19	B7	VERT	DRIVING SHOE	30	0.50	-100 96.25'	120	390
8/2/19	B8	VERT	DRIVING SHOE	30	0.50	-100 96.5'	120	390
8/3/19	B9	VERT	DRIVING SHOE	30	0.50	-100 94.25'	120	390
8/3/19	B10	VERT	DRIVING SHOE	30	0.50	-100 90.75'	120	390
8/2/19	B11	VERT	DRIVING SHOE	30	0.50	-100 95.25'	120	390
8/2/19	B12	VERT	DRIVING SHOE	30	0.50	-100 95.25'	120	390
7/9/19	B13	VERT	DRIVING SHOE	30	0.50	-100 100'	120	390
8/13/19	C1	VERT	DRIVING SHOE	30	0.50	-100	110	370
8/14/19	C2	VERT	DRIVING SHOE	30	0.50	-100	110	370
8/14/19	C3	VERT	DRIVING SHOE	30	0.50	-100	110	370
8/14/19	C4	VERT	DRIVING SHOE	30	0.50	-100	110	370
8/14/19	C5	VERT	DRIVING SHOE	30	0.50	-100	110	370
8/14/19	C6	VERT	DRIVING SHOE	30	0.50	-100	110	370
8/14/19	C7	VERT	DRIVING SHOE	30	0.50	-100	110	370
8/15/19	C8	VERT	DRIVING SHOE	30	0.50	-100	110	370
8/15/19	C9	VERT	DRIVING SHOE	30	0.50	-100	110	370
8/15/19	C10	VERT	DRIVING SHOE	30	0.50	-100	110	370
8/15/19	C11	VERT	DRIVING SHOE	30	0.50	-100	110	370
8/15/19	C12	VERT	DRIVING SHOE	30	0.50	-100	110	370
8/15/19	C13	VERT	DRIVING SHOE	30	0.50	-100	110	370

Finish Date	PILE SCHEDULE							
	LOCATION	PILE ORIENTATION	PILE TIP	DIAMETER (in.)	THICKNESS (in.)	MINIMUM TIP ELEV (ft.)	MINIMUM SUPPLY LENGTH (ft.)	TOTAL NOMINAL BEARING CAPACITY (KIPS)
8/21/19	D1	VERT	DRIVING SHOE	30	0.50	-90	130	295
8/21/19	D2	VERT	DRIVING SHOE	30	0.50	-90	130	295
8/21/19	D3	VERT	DRIVING SHOE	30	0.50	-90	130	295
8/21/19	D4	VERT	DRIVING SHOE	30	0.50	-90	130	295
8/21/19	D5	VERT	DRIVING SHOE	30	0.50	-90	130	295
8/21/19	D6	VERT	DRIVING SHOE	30	0.50	-90	130	295
8/21/19	D7	VERT	DRIVING SHOE	30	0.50	-90	130	295
8/23/19	D8	VERT	DRIVING SHOE	30	0.50	-90	130	295
8/23/19	D9	VERT	DRIVING SHOE	30	0.50	-90	130	295
8/23/19	D10	VERT	DRIVING SHOE	30	0.50	-90	130	295
8/23/19	D11	VERT	DRIVING SHOE	30	0.50	-90	130	295
8/23/19	D12	VERT	DRIVING SHOE	30	0.50	-90	130	295
8/23/19	D13	VERT	DRIVING SHOE	30	0.50	-90	130	295
9/7/19	E1	VERT	FIN	24	0.50	-90	120	340
9/9/19	E2	BATTER	FIN	24	0.50	-90	120	340
9/8/19	E3	BATTER	FIN	24	0.50	-90	120	340
9/5/19	F1A	VERT	DRIVING SHOE	24	0.50	-90	120	200
9/5/19	F1B	VERT	DRIVING SHOE	24	0.50	-90	120	200
8/29/19	F2A	VERT	DRIVING SHOE	24	0.50	-90	120	200
8/29/19	F2B	VERT	DRIVING SHOE	24	0.50	-90	120	200
8/29/19	F3A	VERT	DRIVING SHOE	24	0.50	-90	120	200
8/29/19	F3B	VERT	DRIVING SHOE	24	0.50	-90	120	200
8/29/19	F4A	VERT	DRIVING SHOE	24	0.50	-90	120	200
8/29/19	F4B	VERT	DRIVING SHOE	24	0.50	-90	120	200
8/29/19	F5A	VERT	DRIVING SHOE	24	0.50	-90	120	200
8/29/19	F5B	VERT	DRIVING SHOE	24	0.50	-90	120	200

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021

PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
AK. LIC# AECC250

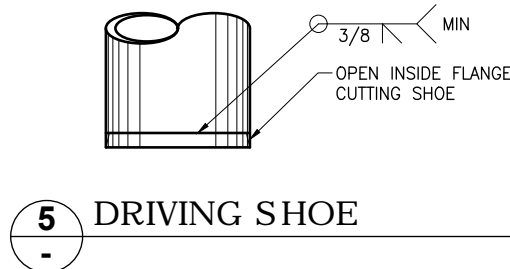
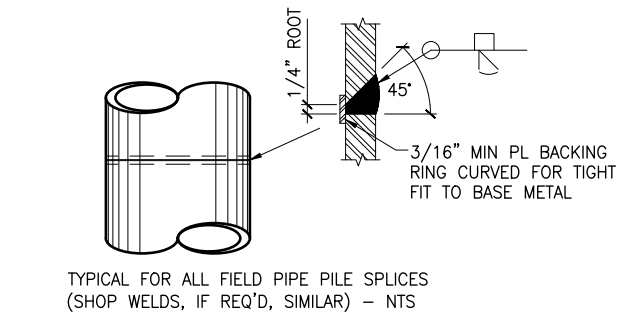
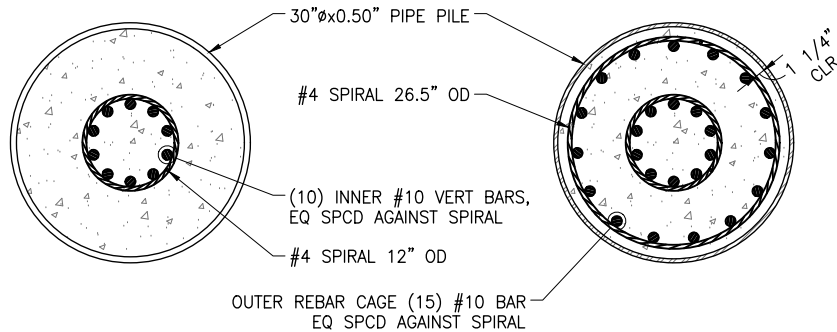
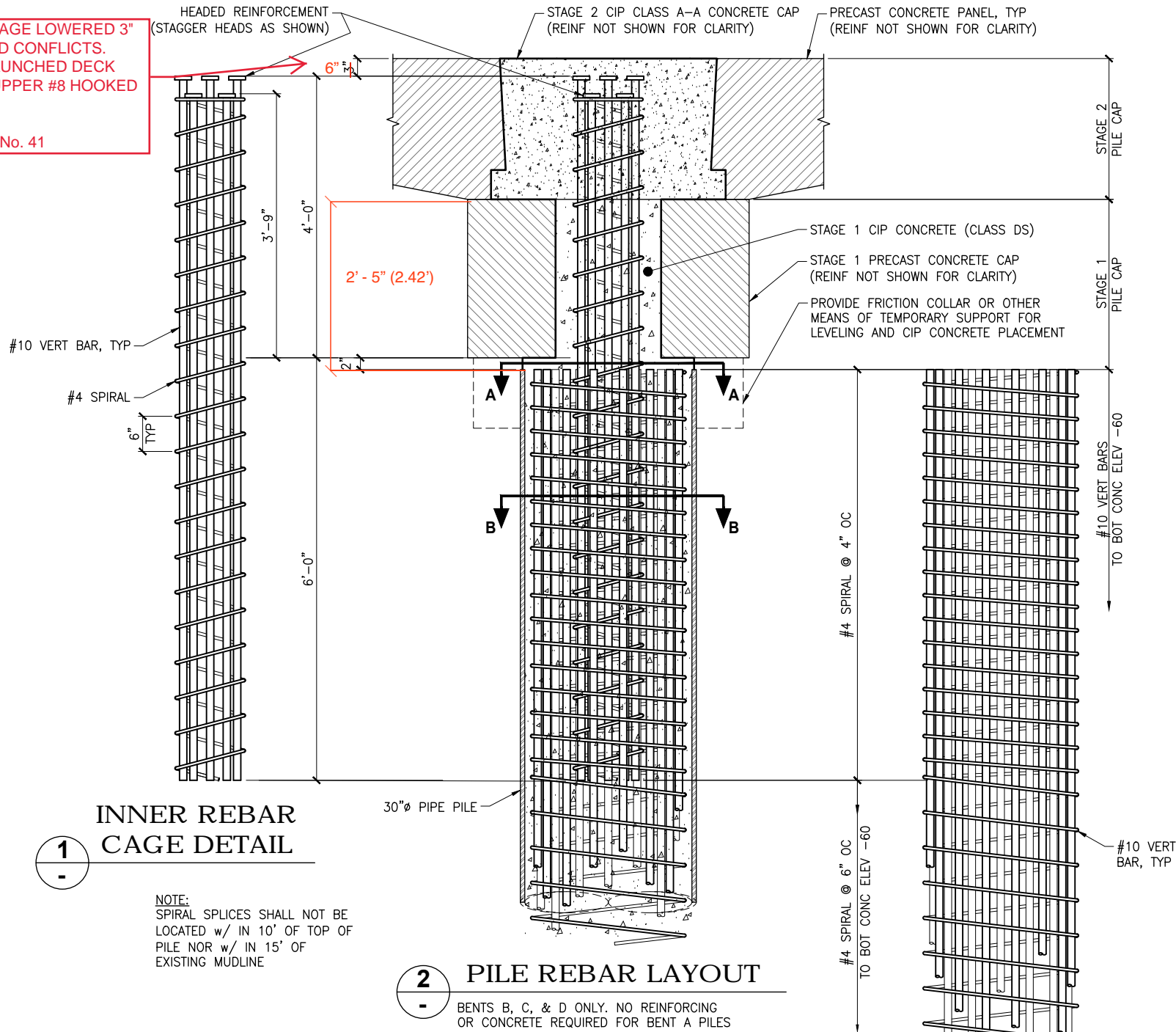


STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
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6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763
SAND POINT DOCK REPLACEMENT
PILE SCHEDULE

FILE J:\2016\161019 Sand Point Dock Replacement\G. Drawings\Civil\13 Pile Details.dwg DATE 11/23/2018 8:03 LAYOUT 13 DESIGNED XXX CHECKED XXX DRAFTED XXX

INNER CAGE LOWERED 3" TO AVOID CONFLICTS. WITH HAUNCHED DECK PANEL UPPER #8 HOOKED BAR.
SEE RFI No. 41

Inner cages shifted 2" to the West (Dock orientation) due to rebar conflict. See RFI No. 50



Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

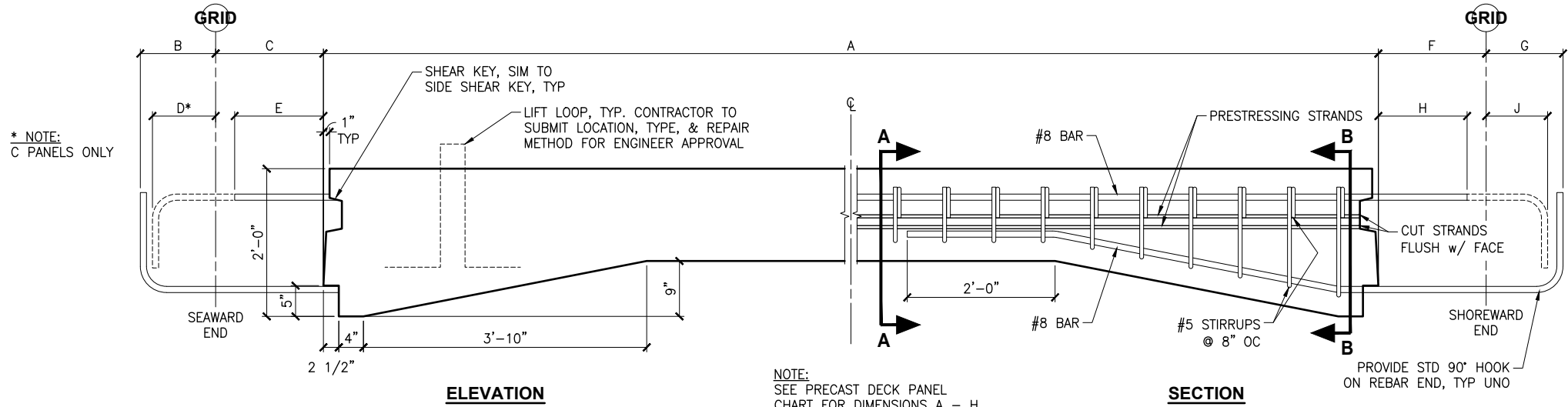
Date: 12.02.2021

PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
AK. LIC# AECC250



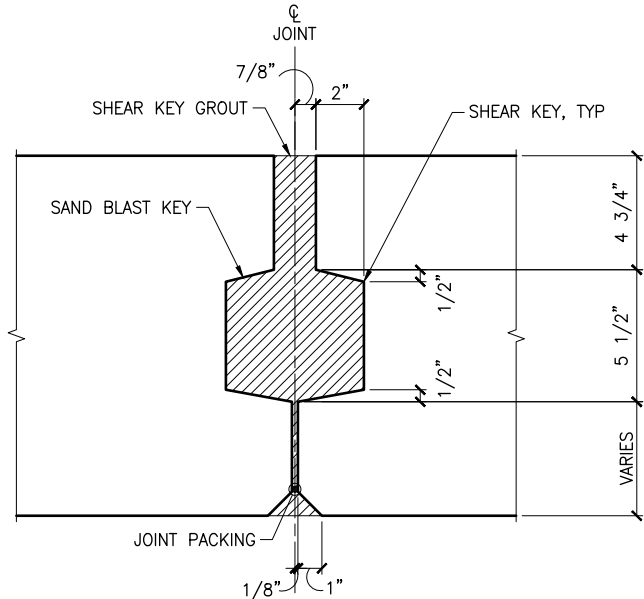
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763
SAND POINT DOCK REPLACEMENT
PILE DETAILS

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFWHY00006	2018	14	53

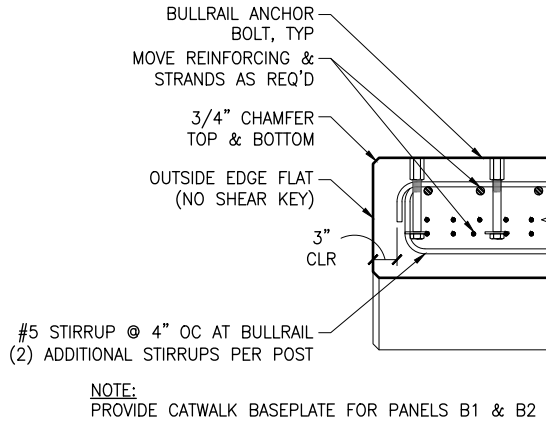
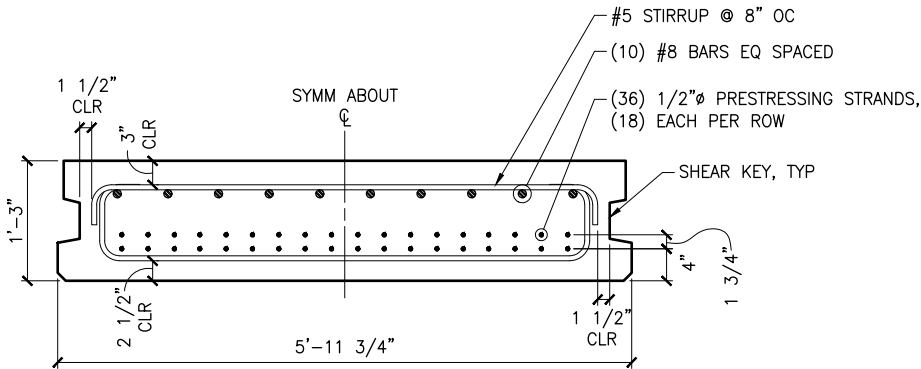


PRECAST DECK PANEL CHART			
ID	PANEL A	PANEL B	PANEL C
A	19'-7"	19'-1"	19'-1"
B	1'-0 1/4"	1'-0 1/4"	1'-5 3/8"
C	1'-5 1/2"	1'-5 1/2"	1'-5 1/2"
D	NA	NA	1'-8"
E	1'-4"	1'-4"	NA
F	11 1/2"	1'-5 1/2"	1'-5 1/2"
G	8 3/4"	1'-0 1/4"	1'-0 1/4"
H	NA	1'-4"	1'-4"
J	8"	NA	NA

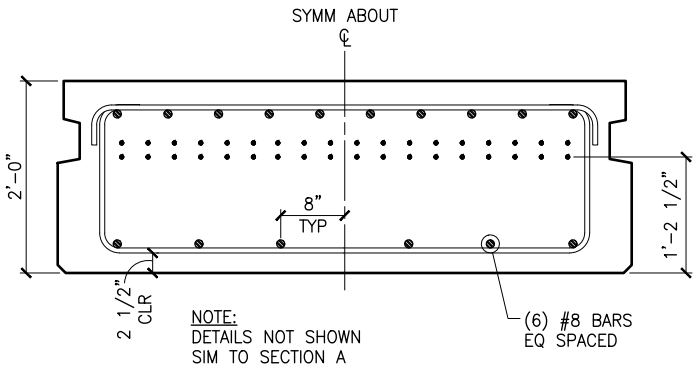
1 PANEL LONGITUDINAL



- PRESTRESSING NOTES:**
- STRANDS SHALL BE LOW-RELAXATION 7-WIRE PRESTRESSING STRANDS, ASTM A416 GR 270, WITH A CROSS SECTIONAL AREA OF 0.153 IN²
 - STRESSING STRANDS SHALL NOT BE STRESSED BEYOND 216 KSI AT ANY TIME.
 - PRESTRESS DESIGN IS BASED ON THE FOLLOWING STRESSES:
JACKING STRESS: 203 KSI
AFTER ALL LOSSES: 170 KSI
 - CONCRETE STRENGTH AT STRESS TRANSFER, F_{ci} = 5,000 PSI



2 PANELS A1, A2, B1, B2, C1, C2



B SECTION

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021

PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
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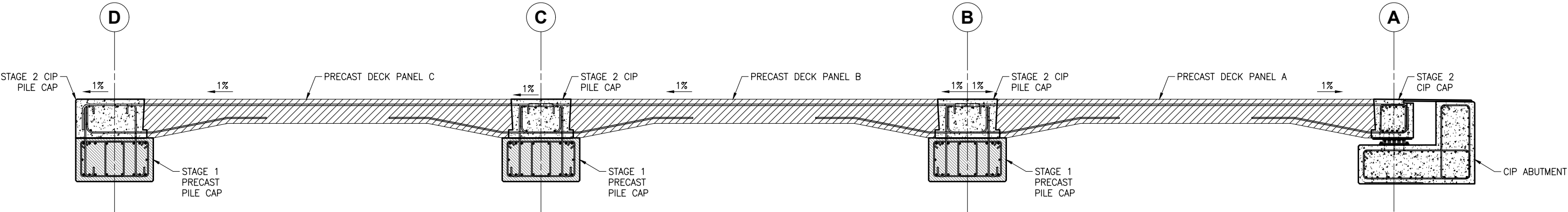
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763

SAND POINT DOCK REPLACEMENT

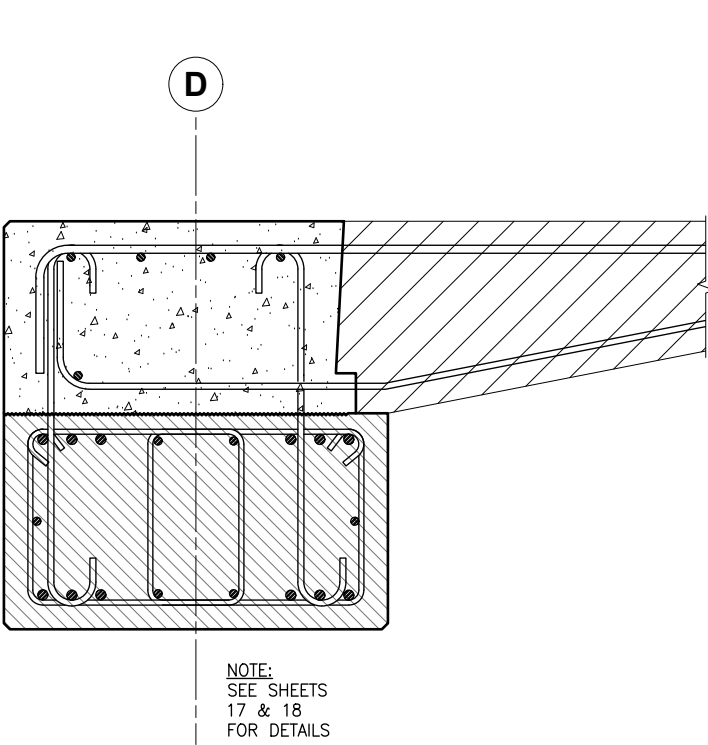
HAUNCHED PANEL DETAILS

FILE J:\2016\161019 Sand Point Dock Replacement\G. Drawings\Civil\15_18 Pile Cap Details.dwg DATE 11/23/2018 8:52 LAYOUT 15 DESIGNED XXX CHECKED XXX DRAFTED XXX

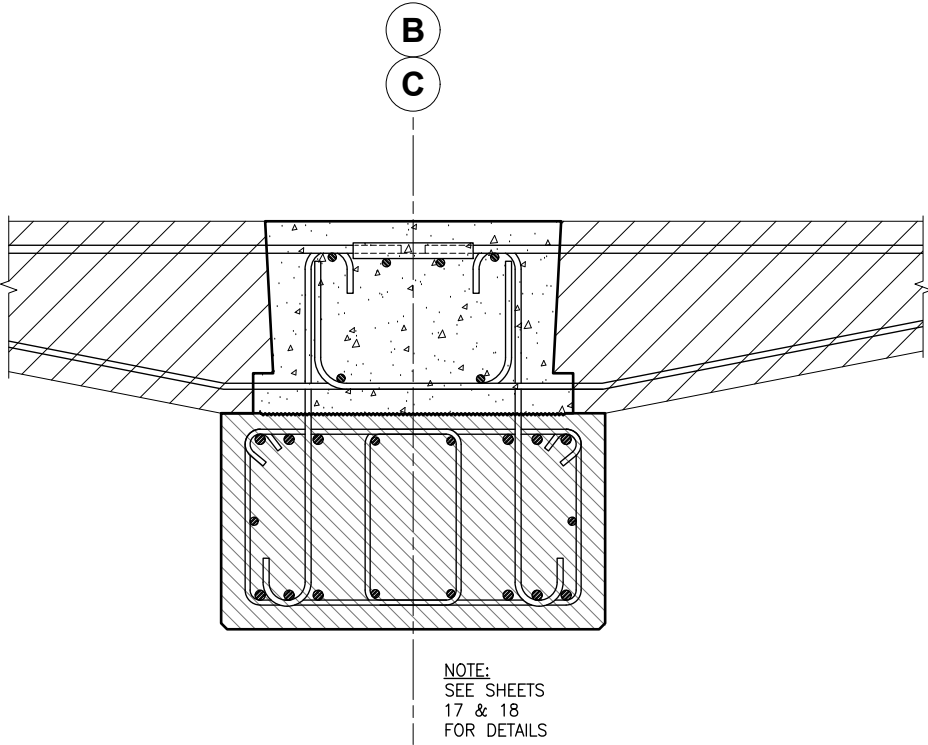
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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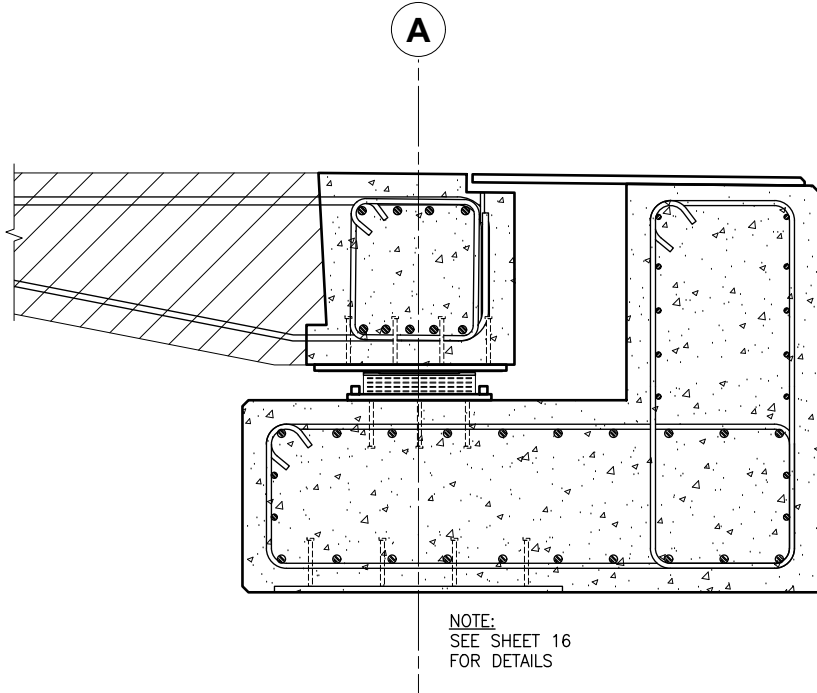
1 OVERALL PILE CAP & DECK PANEL SECTION



2 PILE CAP D



3 PILE CAP B & C



4 PILE CAP A

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.
PE *Randall E. Johnston* Date: 12.02.2021

PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
AK. LIC# AECC250

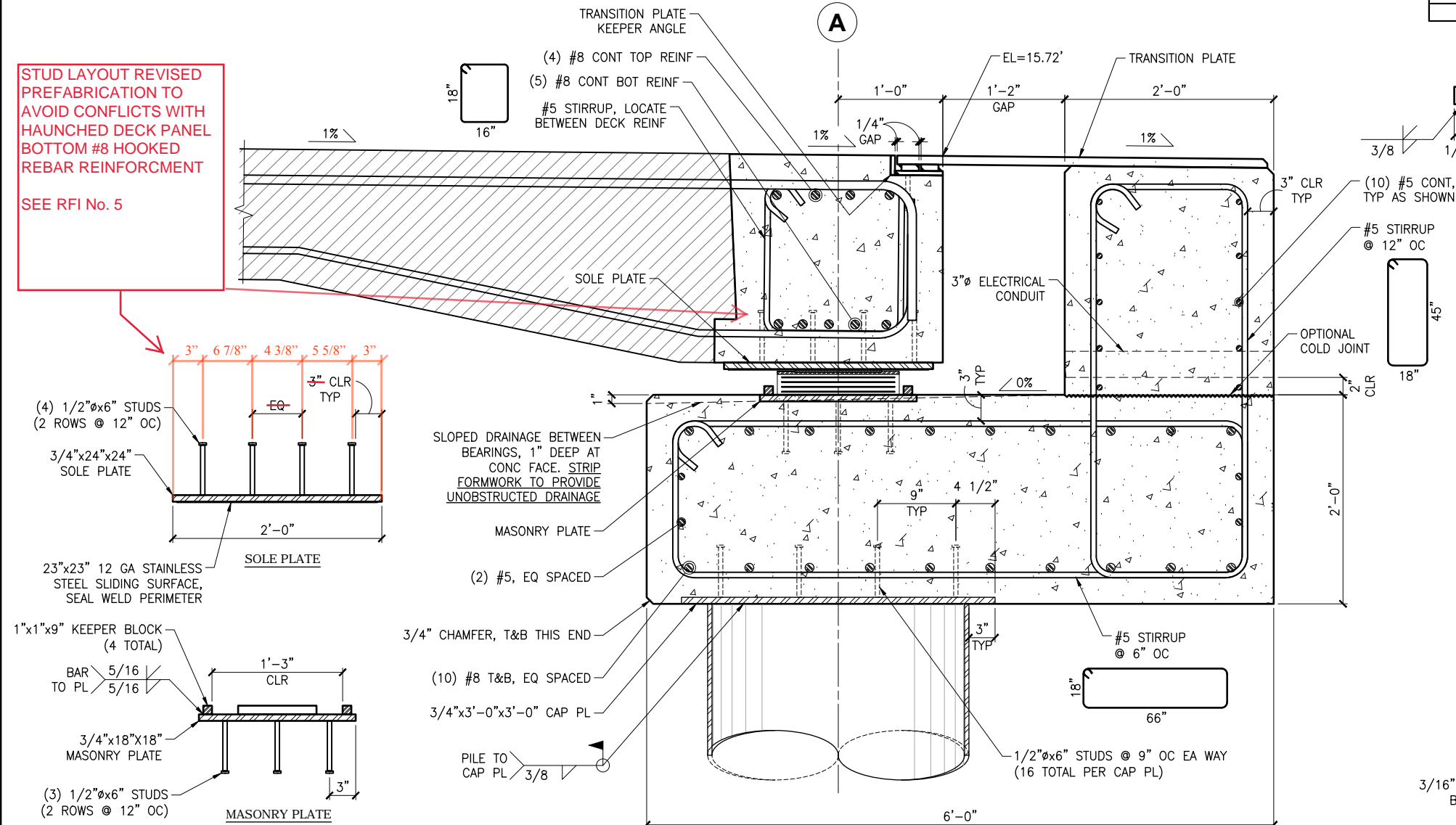


STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
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6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763
SAND POINT DOCK REPLACEMENT
PILE CAP & DECK PANEL
OVERALL TYPICAL SECTION

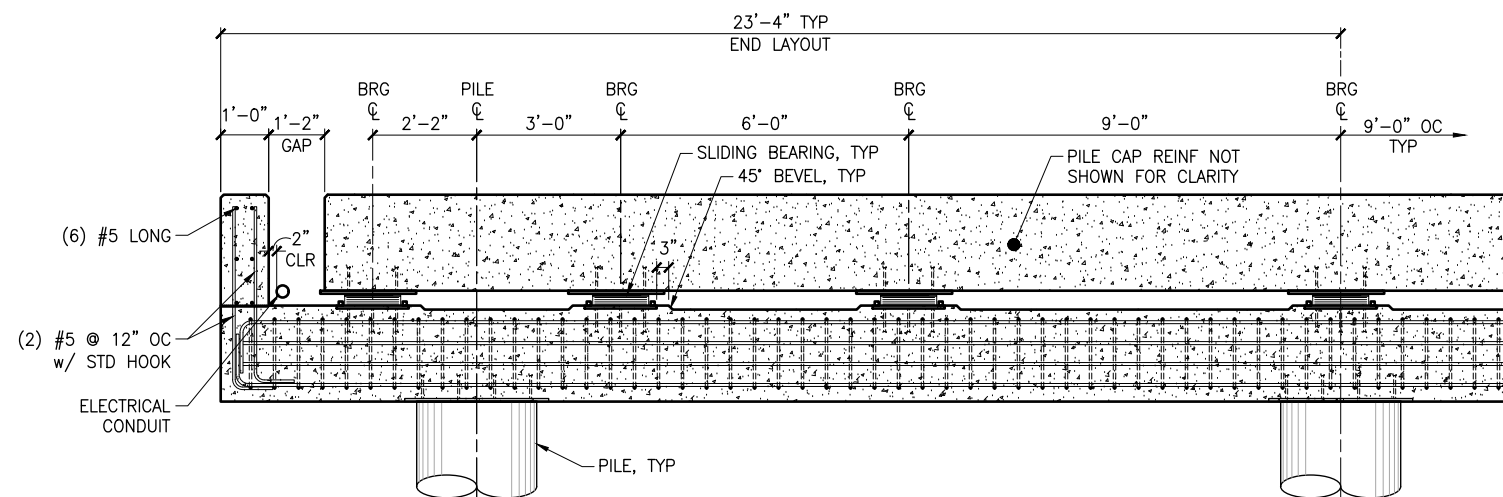
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
				SFHWY00006	2018	16	53

STUD LAYOUT REVISED
PREFABRICATION TO
AVOID CONFLICTS WITH
HAUNCHED DECK PANEL
BOTTOM #8 HOOKED
REBAR REINFORCEMENT

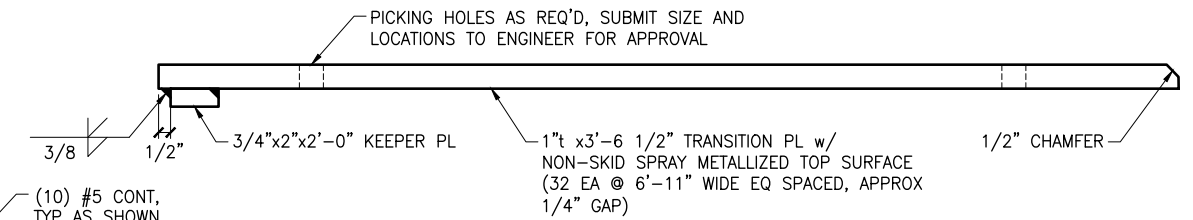
SEE RFI No. 5



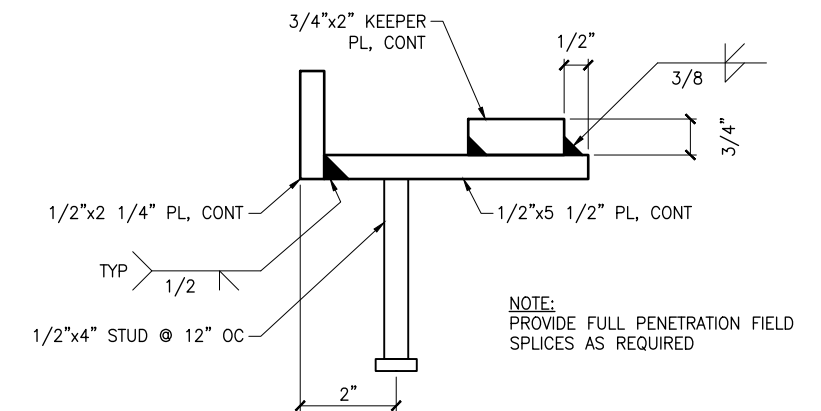
F BENT A SECTION
11



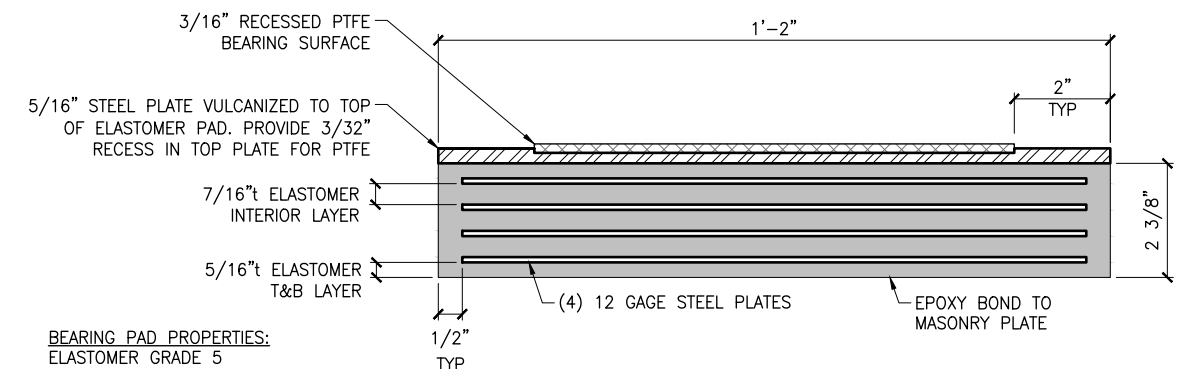
G PARTIAL SECTION @ GRIDLINE A



1 TRANSITION PLATE



2 TRANSITION PL KEEPER ANGLE



BEARING PAD PROPERTIES:
ELASTOMER GRADE 5
DESIGN SHEAR MODULUS = 0.12 KSI
DURMOETER HARDNESS = 50 (SHORE A)
BEARING PADS SHALL ACCOMMODATE THE
FOLLOWING UNFACTORED LOADS:
DEAD LOAD = 30K
LIVE LOAD = 125K

3 SLIDING BEARING PAD DETAIL

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021

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PND ENGINEERS, INC.
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AK. LIC# AECC250



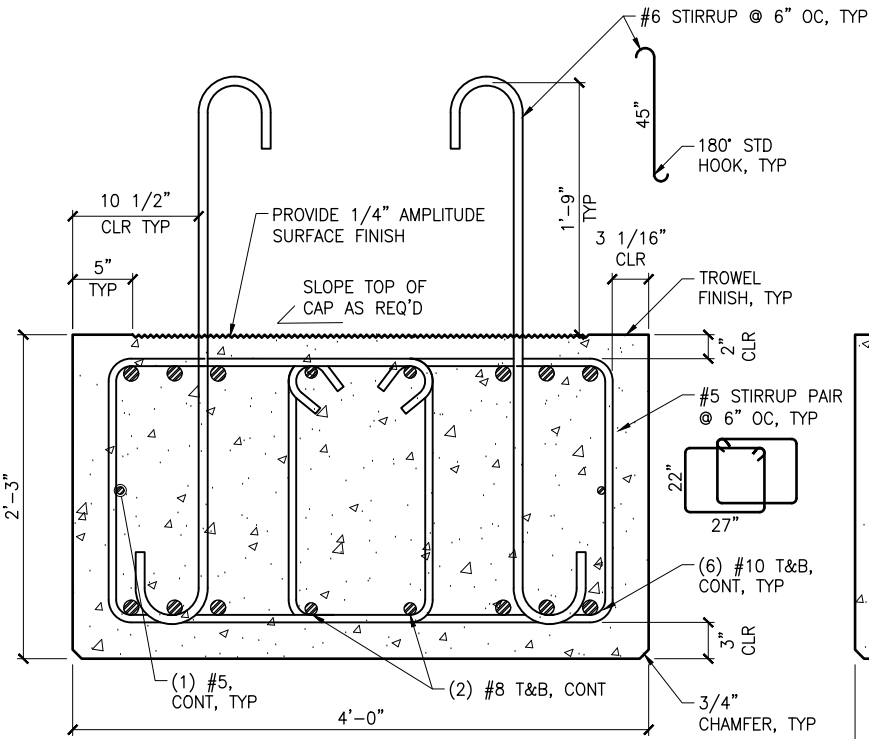
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
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(907) 465-1763

SAND POINT DOCK REPLACEMENT

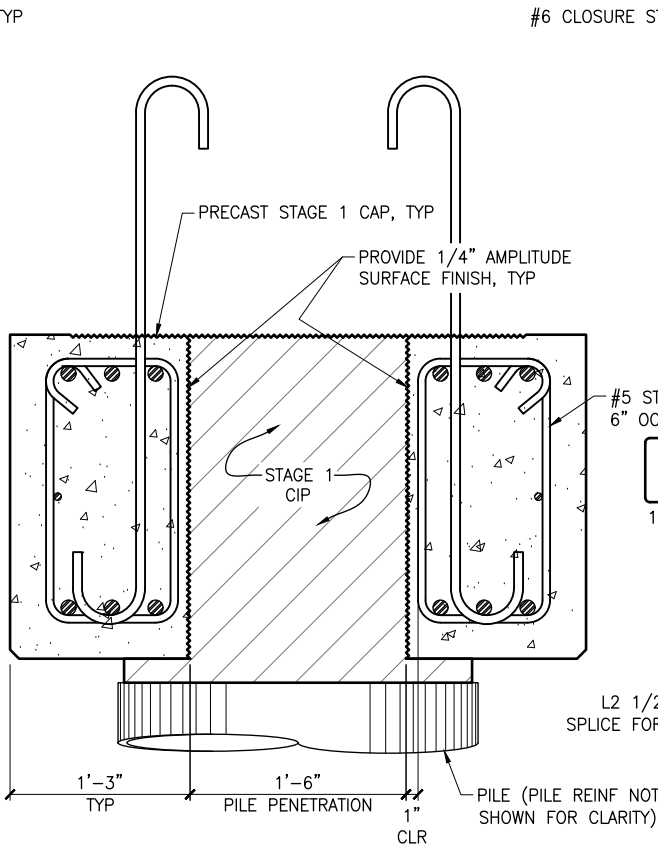
**BENT A PILE CAP &
ABUTMENT DETAILS**

FILE J:\2016\161019 Sand Point Dock Replacement\G. Drawings\Civil\15.18 Pile Cap Details.dwg DATE 11/23/2018 8:52 LAYOUT 17 DESIGNED XXX CHECKED XXX DRAFTED XXX

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
				SFHwy00006	2018	17	53

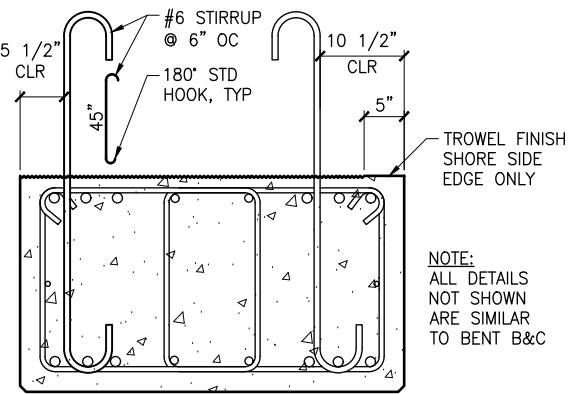


BENT B&C TYPICAL SECTION

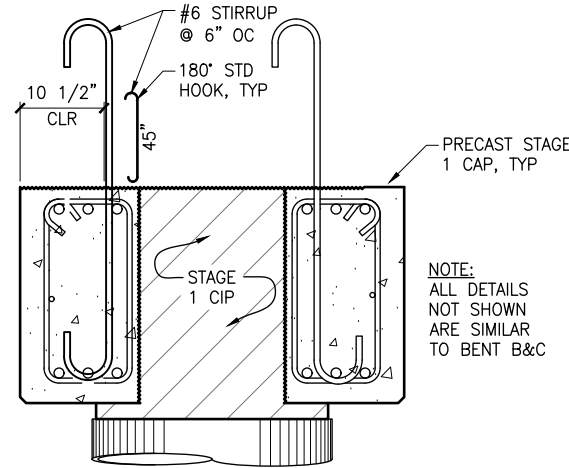


BENT B&C @ PILE PENETRATION

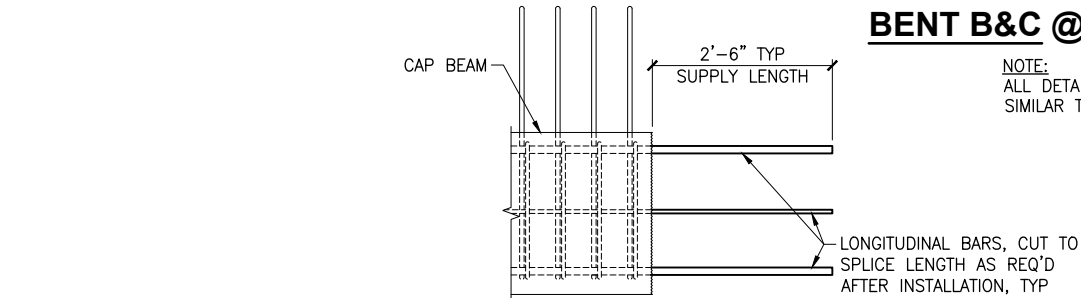
BENT B&C CLOSURE POUR REINFORCEMENT SECTION



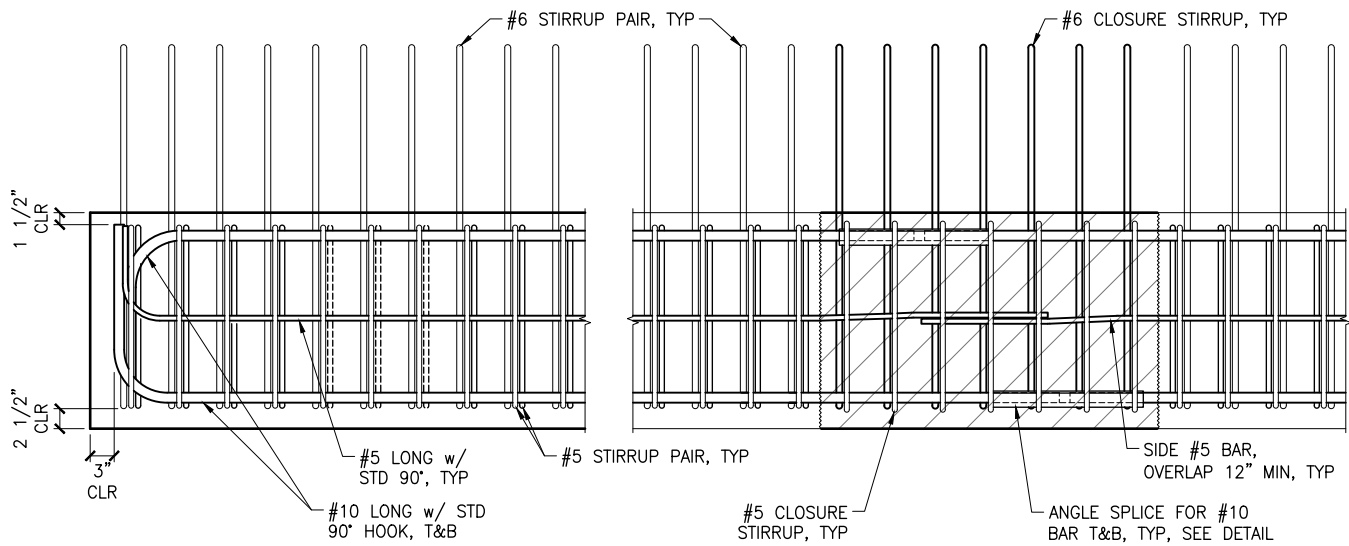
BENT D TYPICAL



BENT D @ PILE PENETRATION

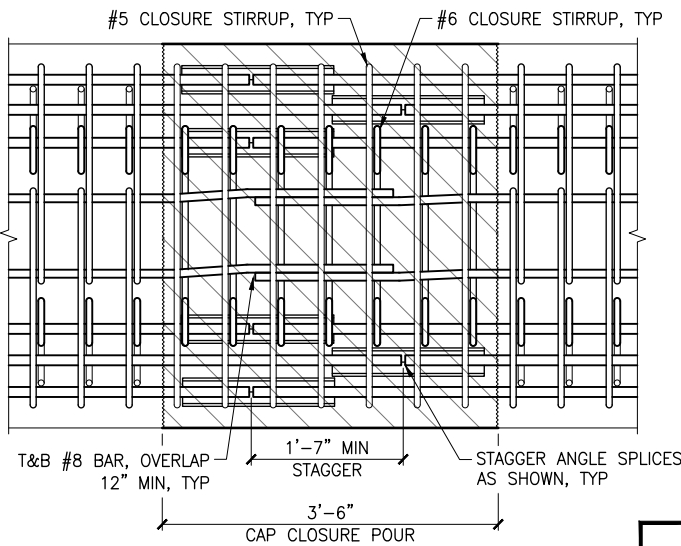


TYPICAL CAP CLOSURE POUR END

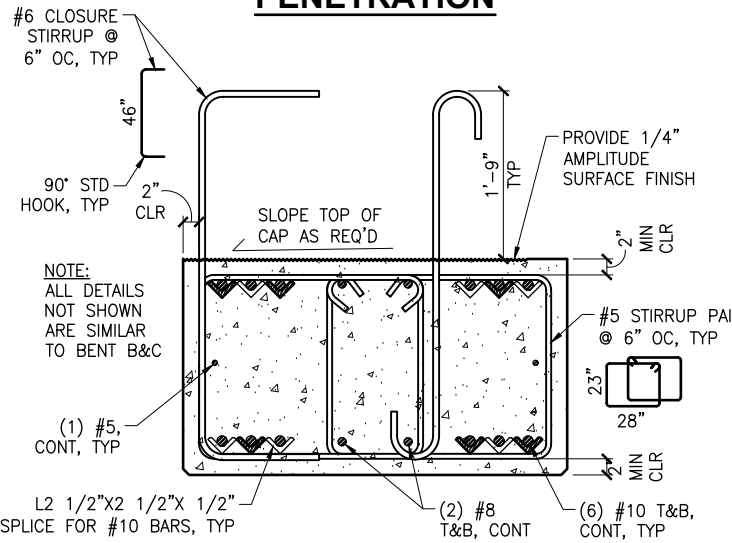


END CAP ELEVATION

TYPICAL CAP CLOSURE POUR ELEVATION



TYPICAL CAP CLOSURE POUR PLAN



BENT D CLOSURE POUR REINFORCEMENT SECTION

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.
PE *Randall E. Johnston* Date: 12.02.2021

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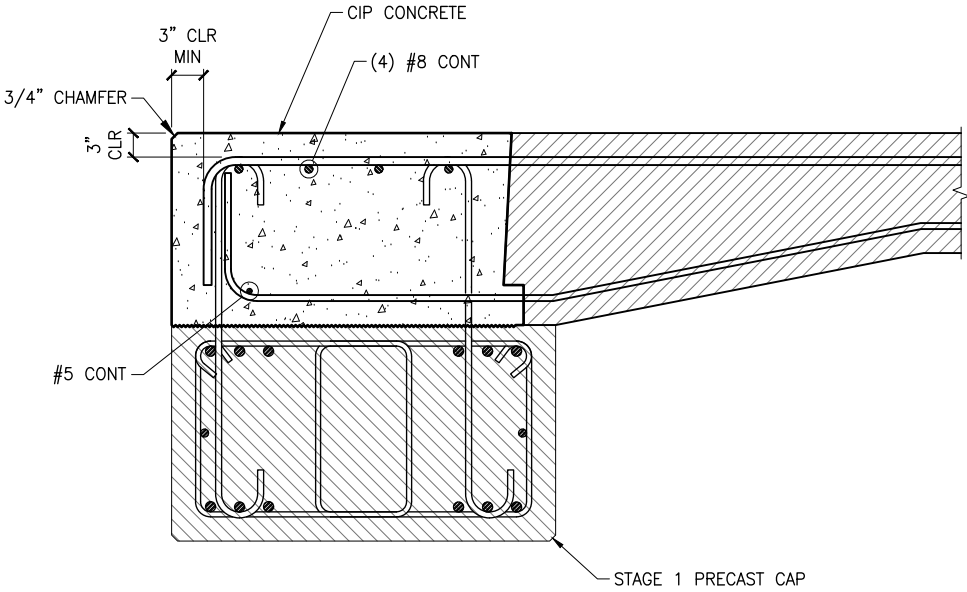
SAND POINT DOCK REPLACEMENT

STAGE 1 CAP DETAILS
BENTS B, C, & D

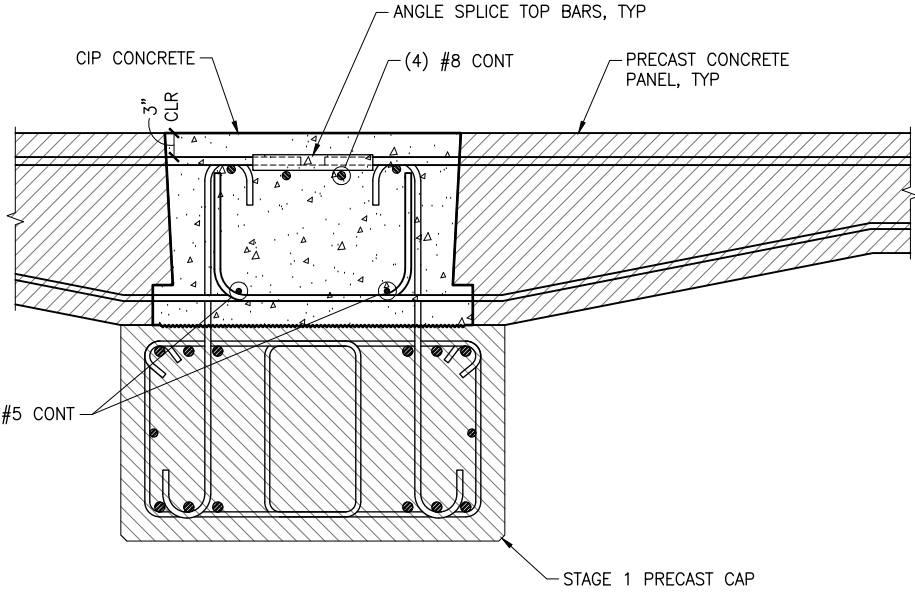
1 STAGE 1 CAP DETAILS BENTS B, C, & D

FILE J:\2016\161019 Sand Point Dock Replacement\G. Drawings\Civil\15_18 Pile Cap Details.dwg DATE 11/23/2018 8:52 LAYOUT 18 DESIGNED XXX CHECKED XXX DRAFTED XXX

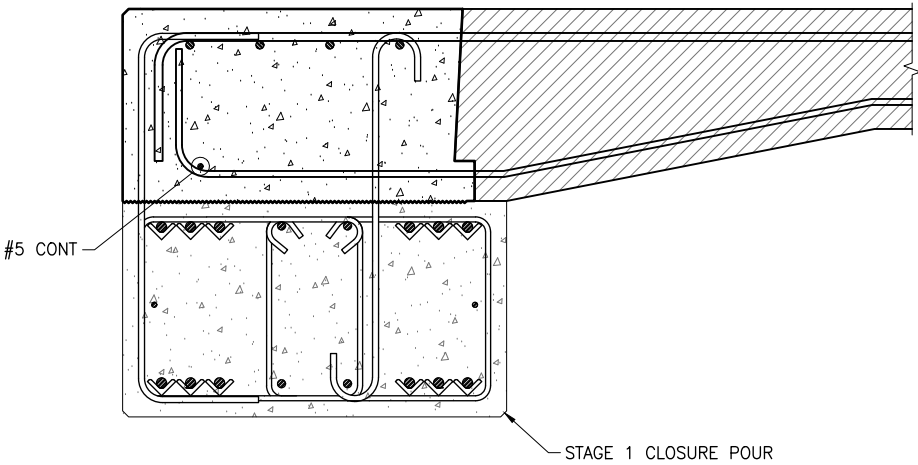
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
				SFHWY00006	2018	18	53



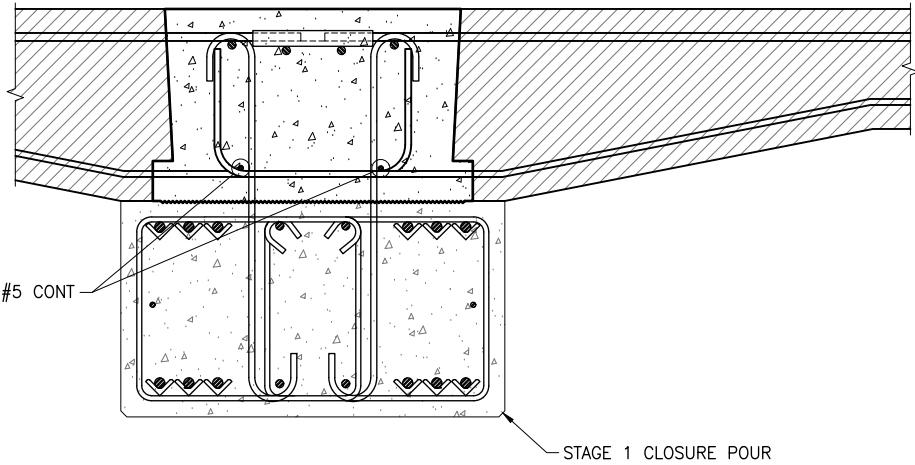
A
11 BENT D TYPICAL



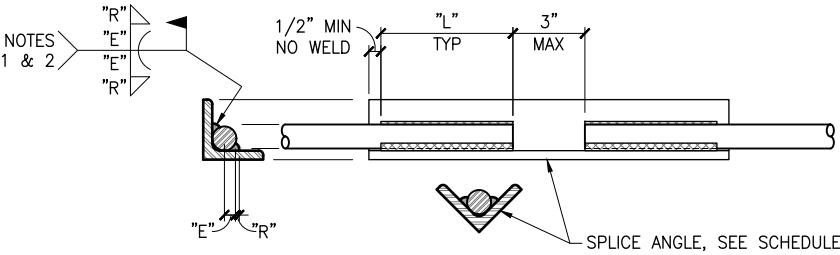
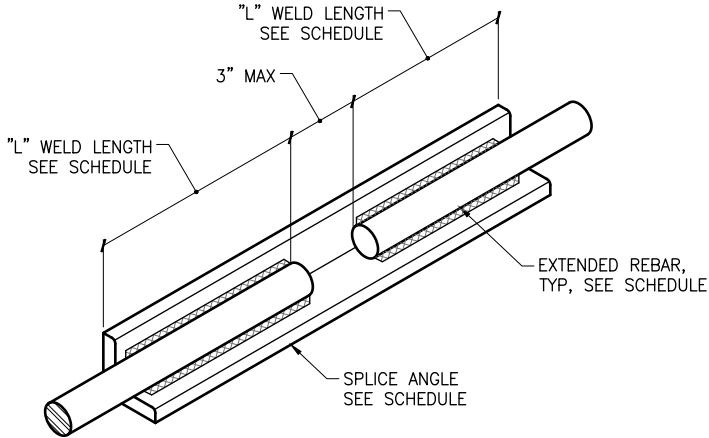
B
11 BENT B & C TYPICAL



C
11 BENT D @ CAP JOINT



D
11 BENT B & C @ CAP JOINT



REBAR SPlice NOTES

- BUILD-UP WELD WHERE GAP BETWEEN REINF BAR AND ANGLE. 3/16" MAX GAP BETWEEN BAR AND ANGLE AT ANY POINT TO BE WELDED.
- PREHEAT PER AWS D1.4.
- USE SPlice ANGLE LISTED FOR THE LARGER SIZE BAR WHEN SPlicing BARS OF DIFFERING SIZES.

REBAR SPlice SCHEDULE

BAR SIZE	SPlice ANGLE	WELD SIZE		WELD LENGTH "L"
		EFF THROAT "E"	REINF "R"	
#10	L2 1/2x2 1/2x1/2 x21"	1/4" MIN	1/8" MIN	9" MIN
#8	L2 1/2x2 1/2x1/2 x18"	3/16" MIN	1/8" MIN	7.5" MIN

E
11 FIELD SPlice WELD DETAIL

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.
PE *Randall E. Johnston* Date: 12.02.2021

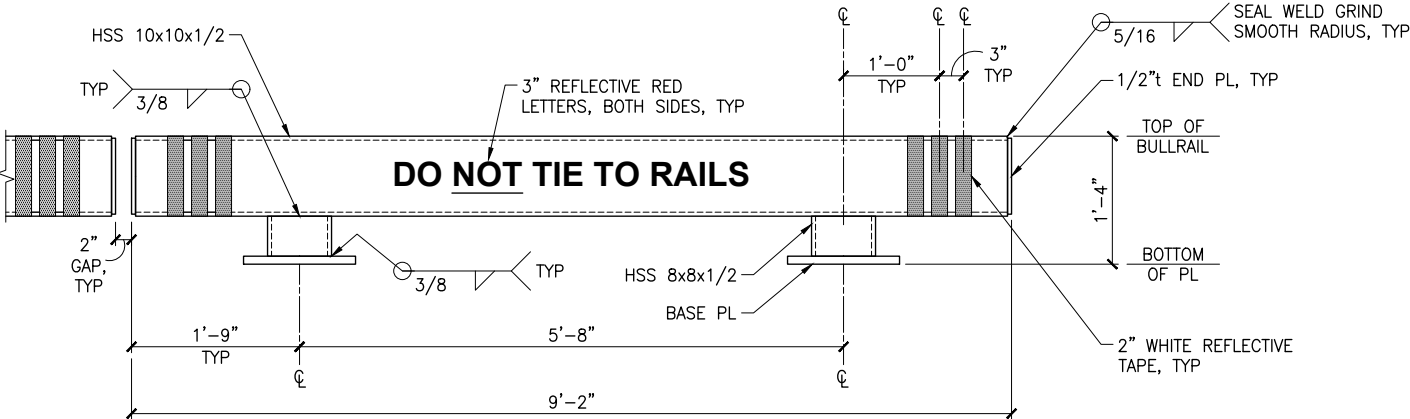
PLANS DEVELOPED BY:
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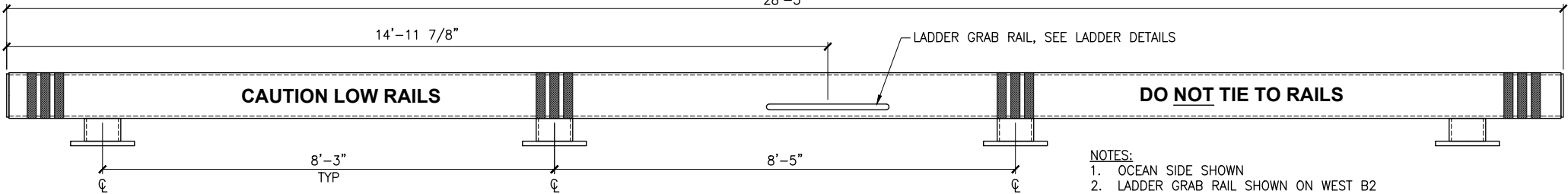
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
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(907) 465-1763
SAND POINT DOCK REPLACEMENT
STAGE 2 CAP DETAILS
BENTS B, C, & D

FILE J:\2016\161019 Sand Point Dock Replacement\G. Drawings\Civil\19 Bullrail Details.dwg DATE 11/21/2018 13:36 LAYOUT 19 DESIGNED XXX CHECKED XXX DRAFTED XXX

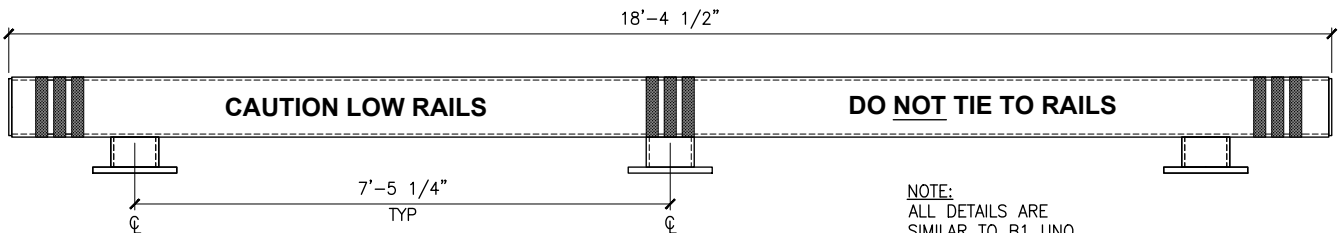
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFHWHY00006	2018	19	53



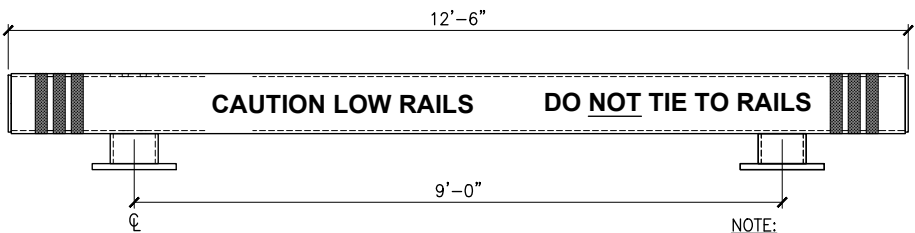
1
10 FIXED BULLRAIL - B1
(2) LOCATIONS



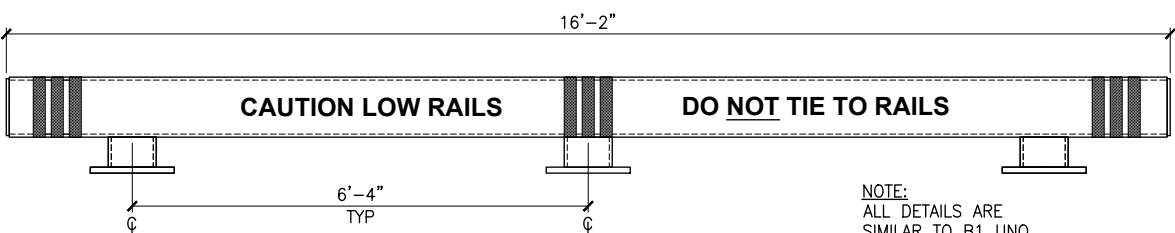
2
- FIXED BULLRAIL - B2
(2) LOCATIONS



3
- FIXED BULLRAIL - B3
(4) LOCATIONS



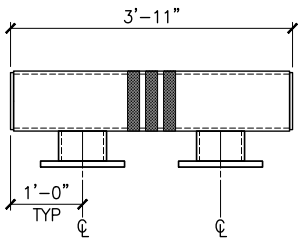
4
- FIXED BULLRAIL - B4
(2) LOCATIONS



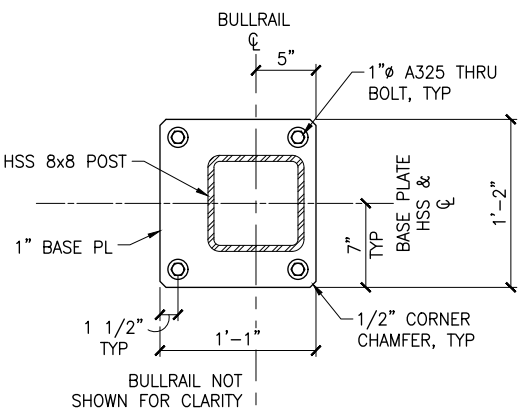
6
- FIXED BULLRAIL - B6
(2) LOCATIONS

- NOTES:
1. OCEAN SIDE SHOWN
 2. LADDER GRAB RAIL SHOWN ON WEST B2 BULLRAIL, EAST B2 BULLRAIL OPPOSITE HAND
 3. ALL DETAILS ARE SIMILAR TO B1 UNO

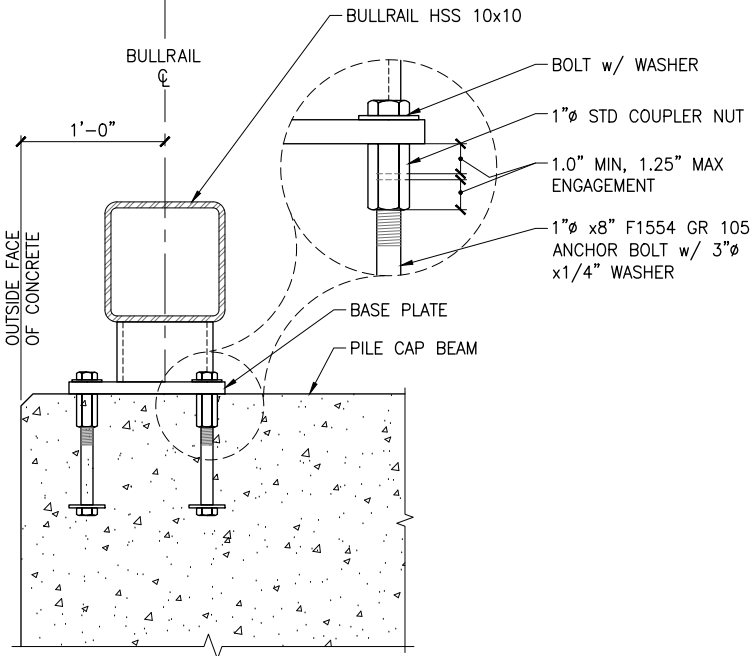
Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.
PE *Randall E. Johnston* Date: 12.02.2021



5
- FIXED BULLRAIL - B5
(2) LOCATIONS



PLAN



SECTION

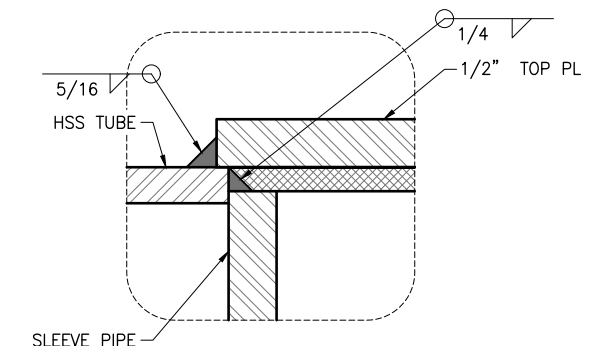
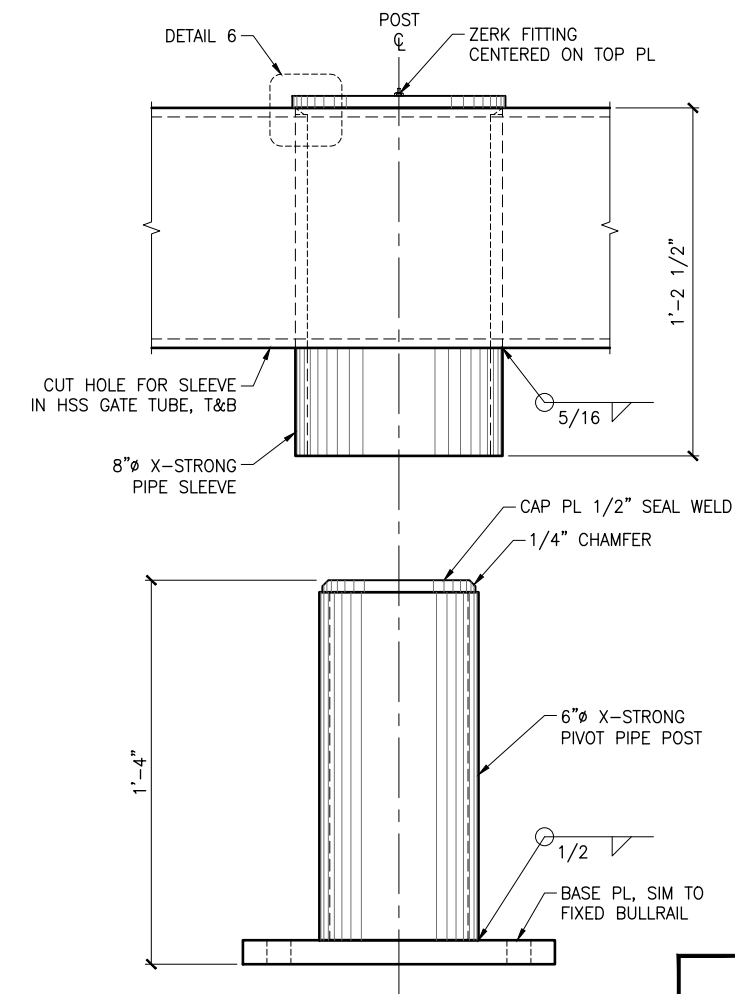
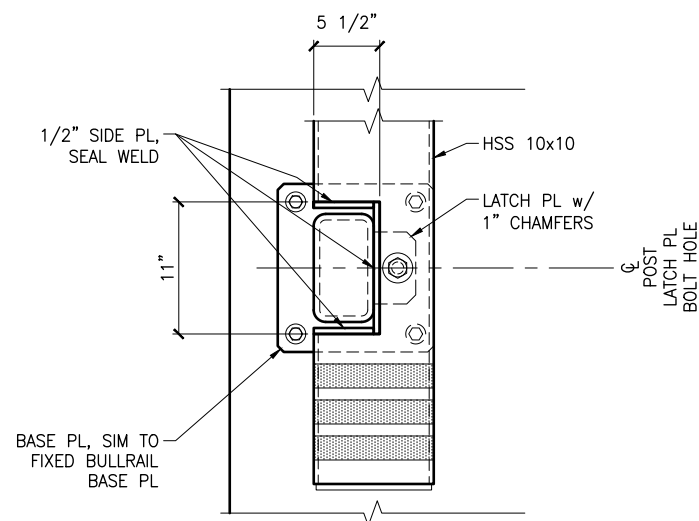
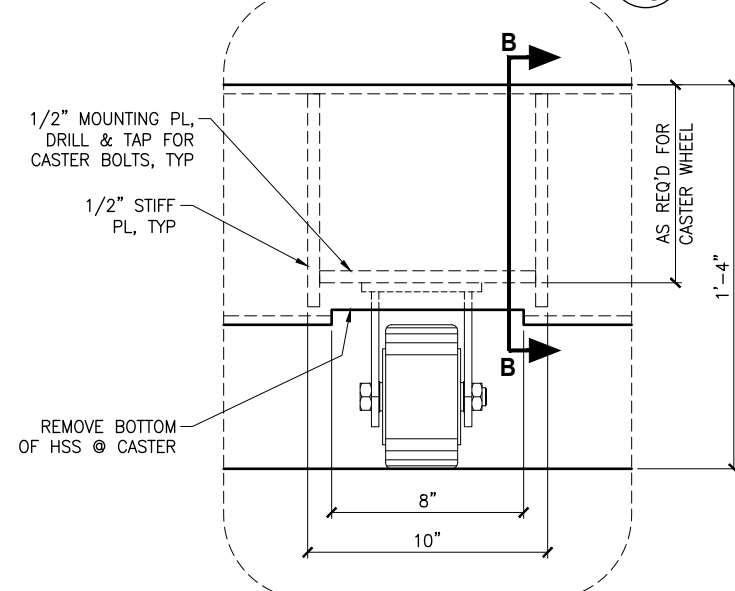
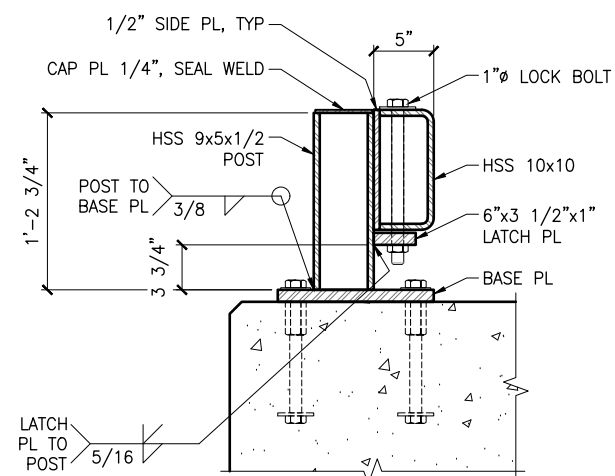
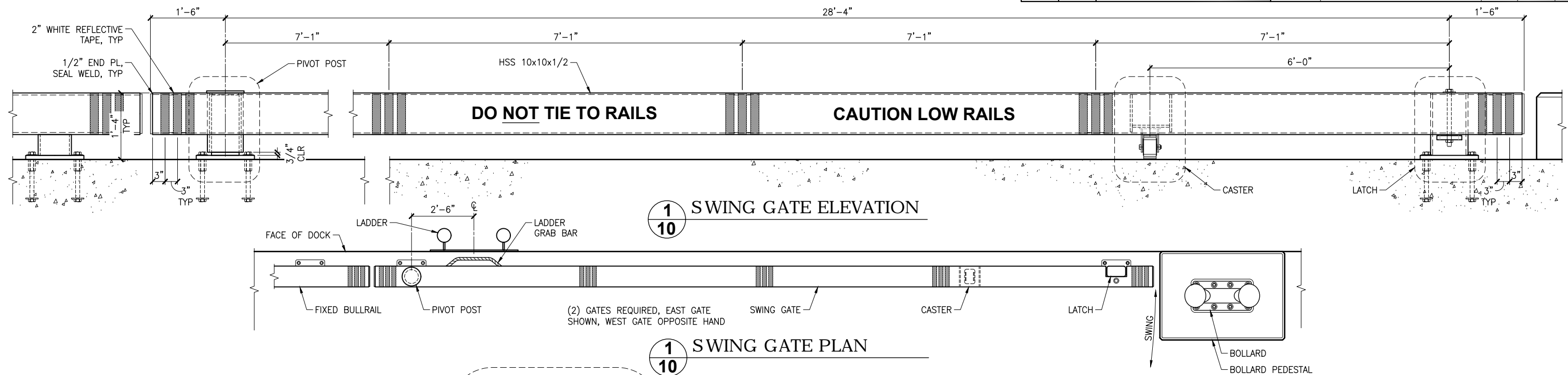
7
- BULLRAIL BASE PLATE

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SAND POINT DOCK REPLACEMENT
BULLRAIL DETAILS

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFHWY00006	2018	20	53



2 LATCH PLAN & SECTION

5 SECTION B-B

4 SWING GATE PIVOT POST

6 DETAIL 6

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021

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1506 W. 36TH AVE
907-561-1011
AK. LIC# AECC250



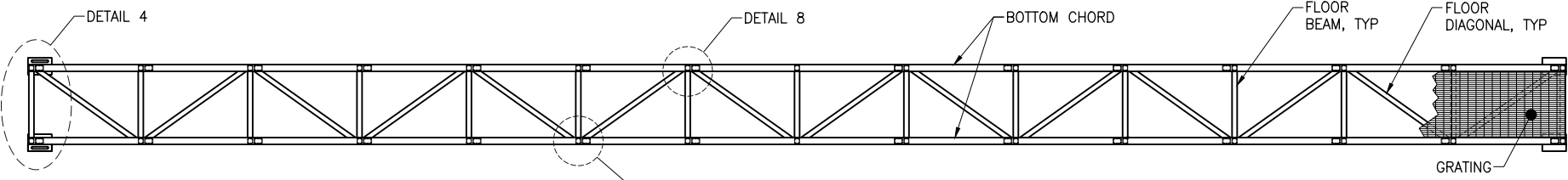
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
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(907) 465-1763

SAND POINT DOCK REPLACEMENT

SWING GATE DETAILS

FILE J:\2016\161019 Sand Point Dock Replacement\G. Drawings\Civil\21 Catwalk Details (1 of 2).dwg DATE 11/21/2018 13:56 LAYOUT 21 DESIGNED XXX CHECKED XXX DRAFTED XXX

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
				SFHWHY00006	2018	21	53

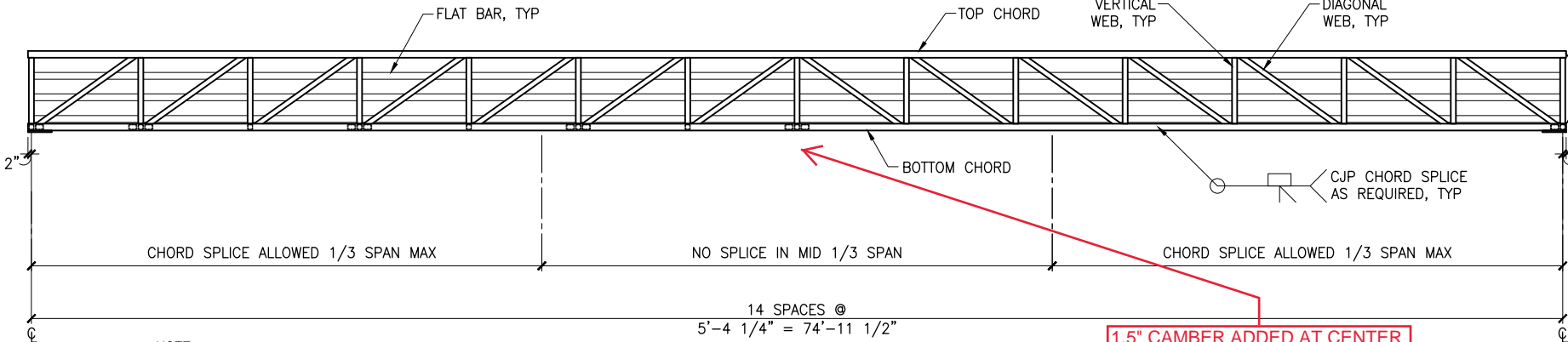


DESIGN CRITERIA:
AASHTO LRFD GUIDE SPECIFICATIONS FOR THE
DESIGN OF PEDESTRIAN BRIDGES
DEAD LOAD - ALL
LIVE LOAD - UNIFORM 70 PSF
SNOW LOAD - 25 PSF
WIND SPEED - 130 MPH

1 FLOOR PLAN
10

Catwalk grating changed
from smooth to serrated.

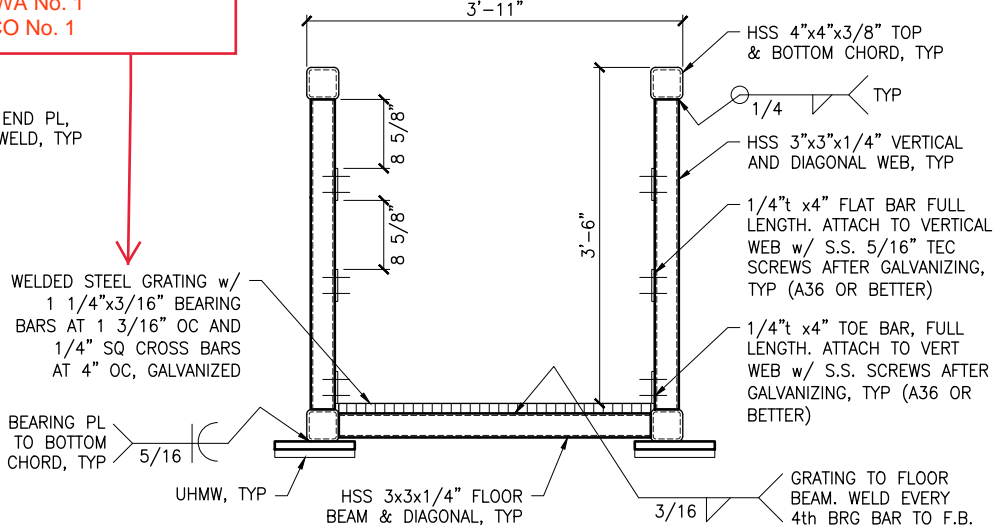
See:
RFI No. 32
RFP No. 1
IWA No. 1
CO No. 1



NOTE:
CHORD SPLICES SHALL NOT
OCCUR WITHIN MID 1/3 SPAN OF
CATWALK

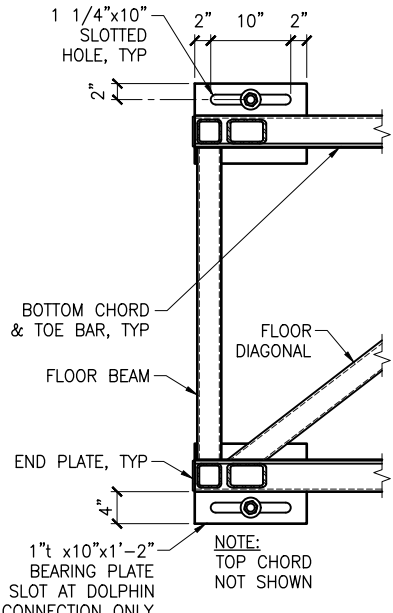
2 ELEVATION
-

1.5" CAMBER ADDED AT CENTER
SPAN OF CATWALK PRE
FABRICATION.
SEE RFI No. 11

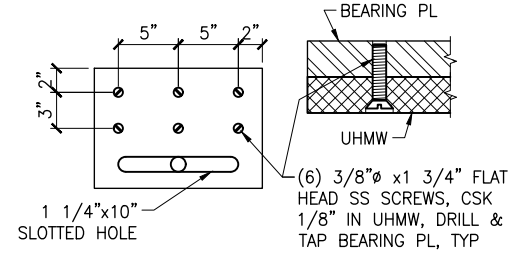


3 END ELEVATION
-

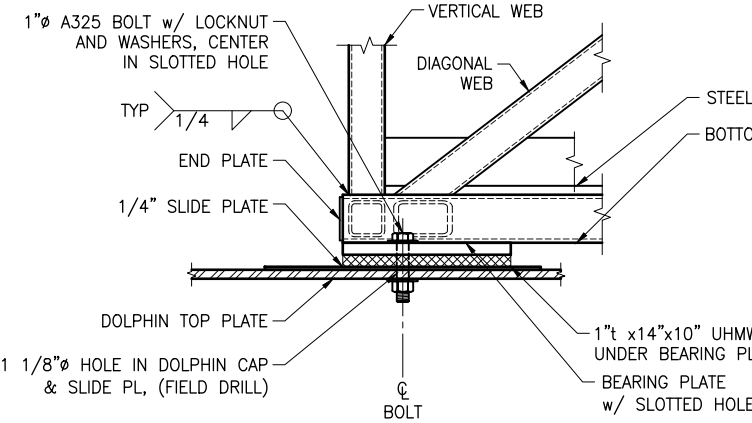
Project As-Built Drawings have been reviewed by the Project
Engineer and represent to the best of my knowledge the project
as constructed.
PE *Randall E. Johnston* Date: 12.02.2021



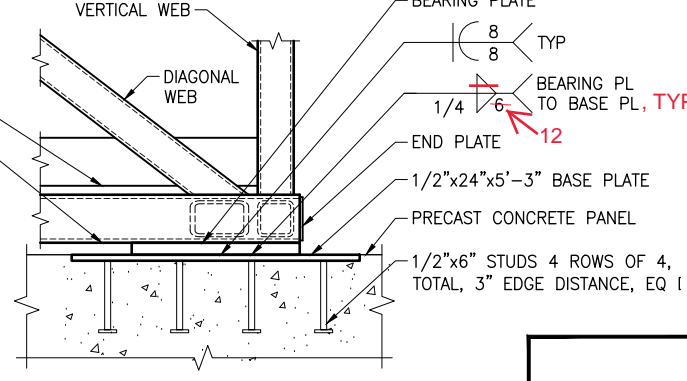
4 DETAIL 4
-



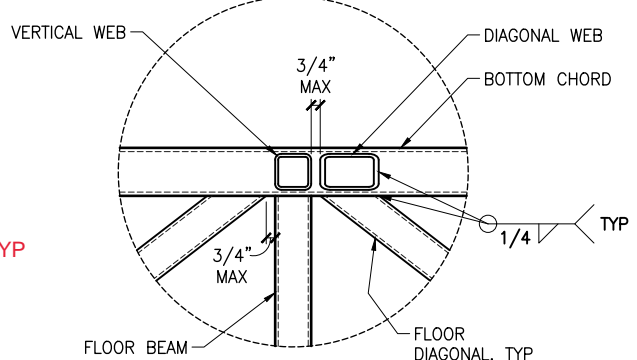
5 UHMW DETAIL
-



6 DOLPHIN END ELEVATION
-



7 DOCK END ELEVATION
-



8 DETAIL 8
-

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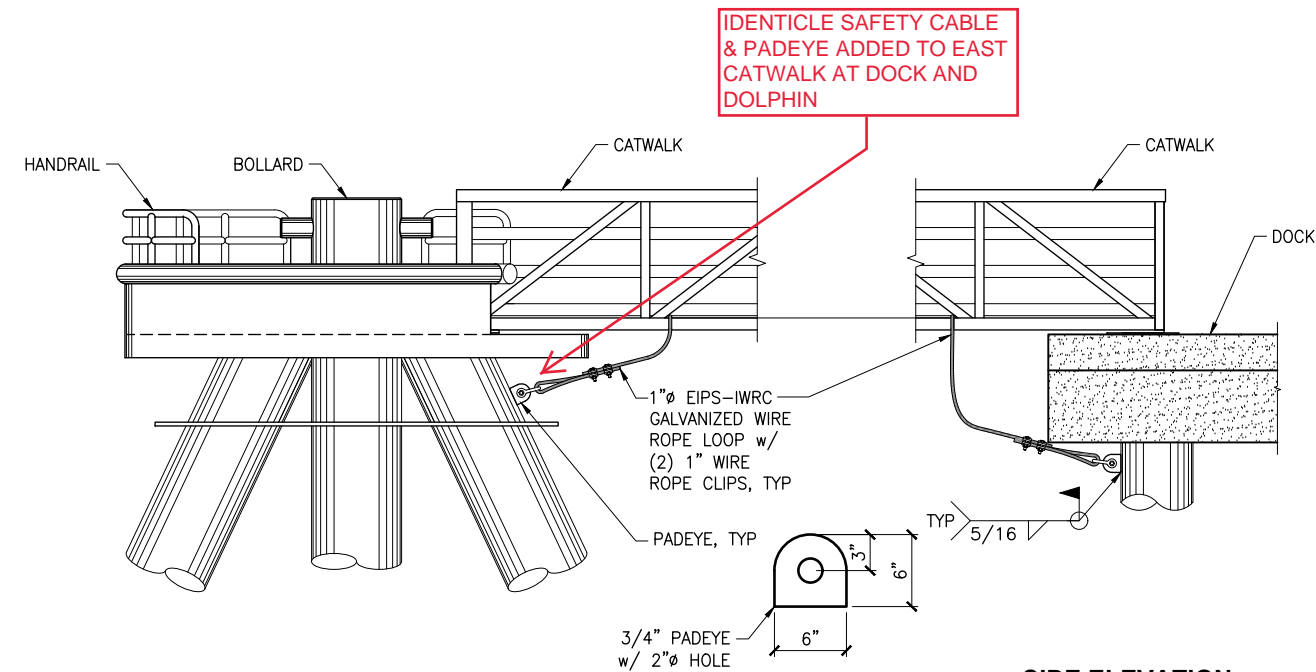


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SAND POINT DOCK REPLACEMENT

CATWALK DETAILS
(1 OF 2)

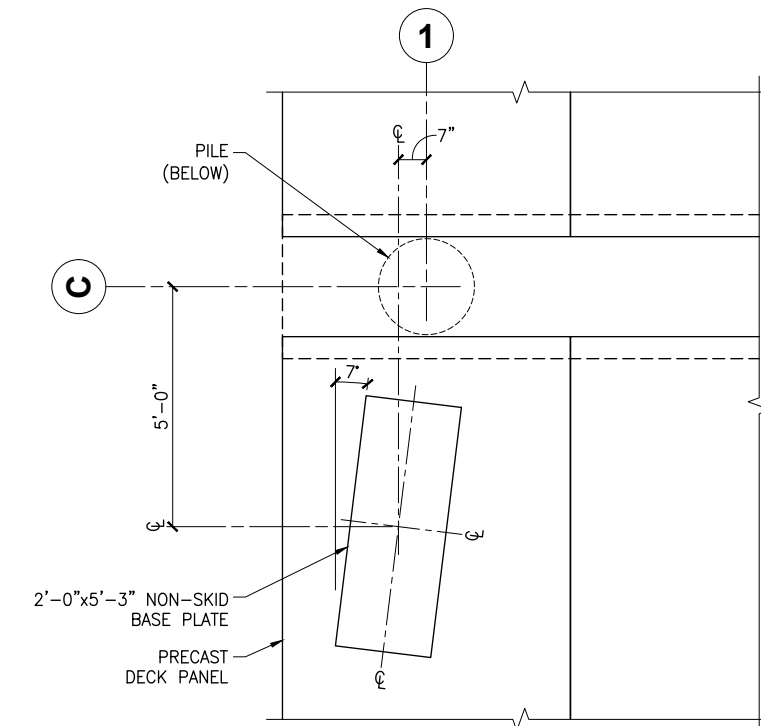
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS	
					SFHWY00006	2018	22	53



SIDE ELEVATION

1 WEST CATWALK AT DOLPHIN

2 WEST CATWALK AT DOCK
-



3 WEST BASE PLATE PLAN LOCATION

NOTE:
WEST CATWALK SHOWN,
EAST CATWALK SIMILAR

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PE *Randall E. Johnston*

Date: 12.02.2021

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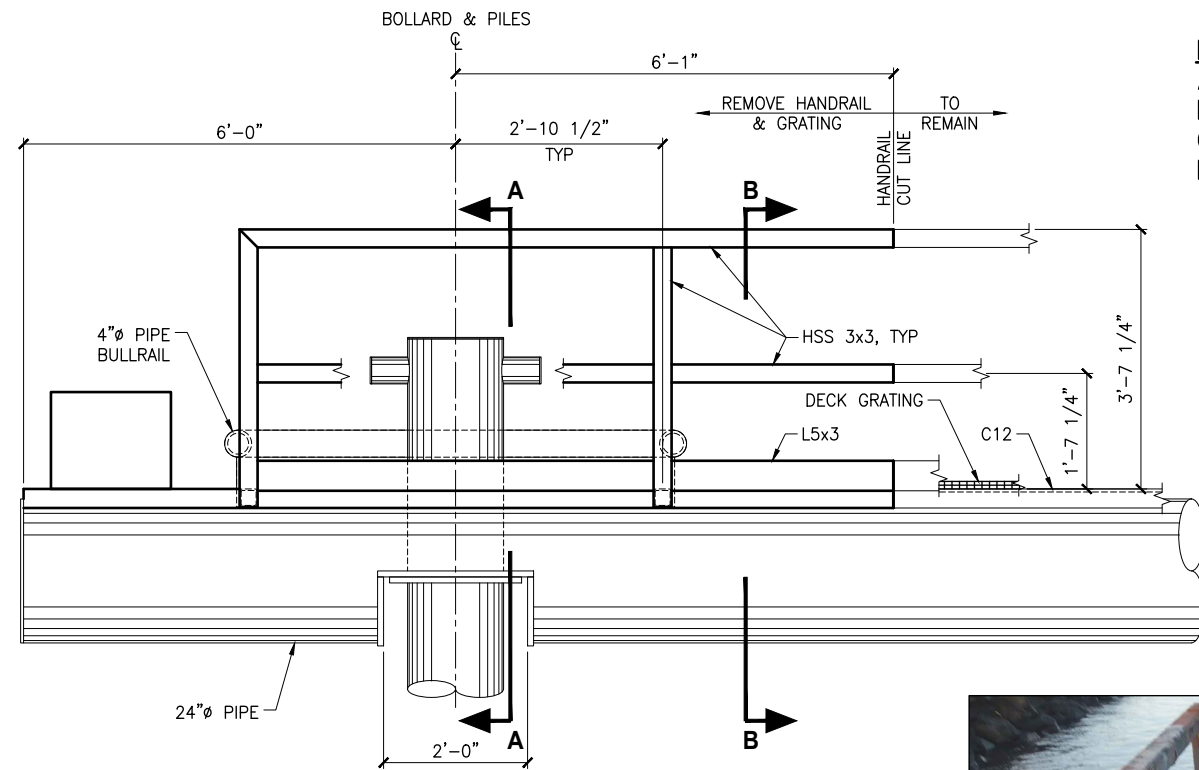


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SAND POINT DOCK REPLACEMENT

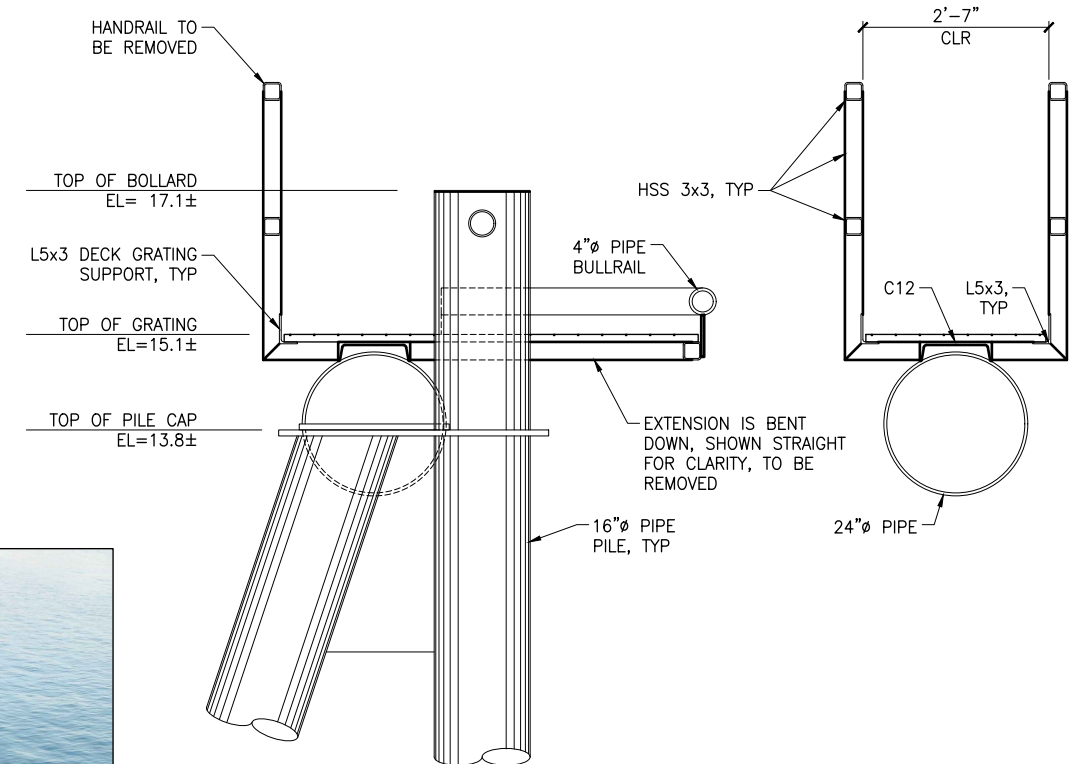
CATWALK DETAILS (2 OF 2)

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
				SFHWY00006	2018	23	53



ELEVATION

NOTE:
ALL DIMENSIONS, ELEVATIONS, &
MEMBER SIZES ARE APPROXIMATE.
CONTRACTOR TO VERIFY PRIOR TO
FABRICATION & CONSTRUCTION

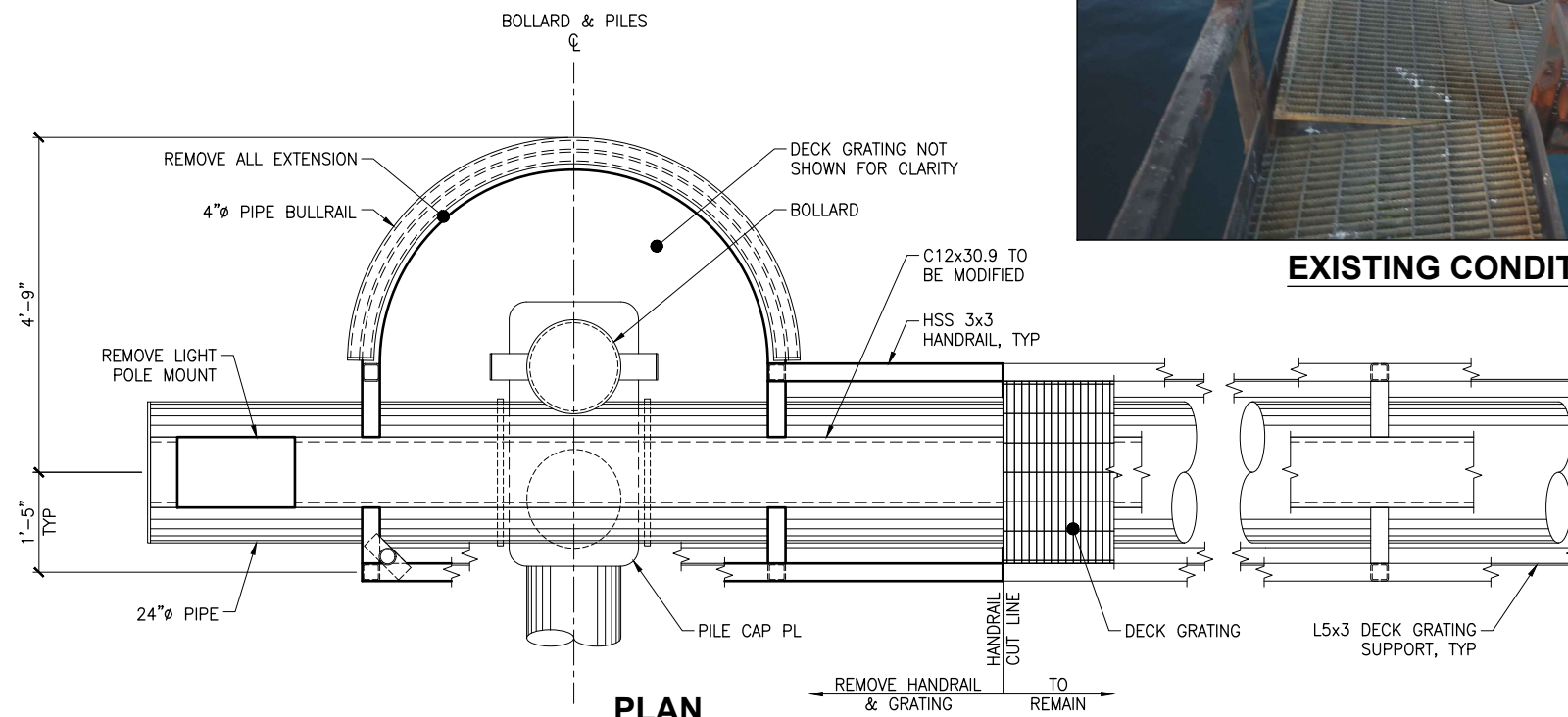


SECTION A

SECTION B



EXISTING CONDITION



PLAN

1 DOLPHIN PLATFORM DETAILS

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021

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AK. LIC# AECC250



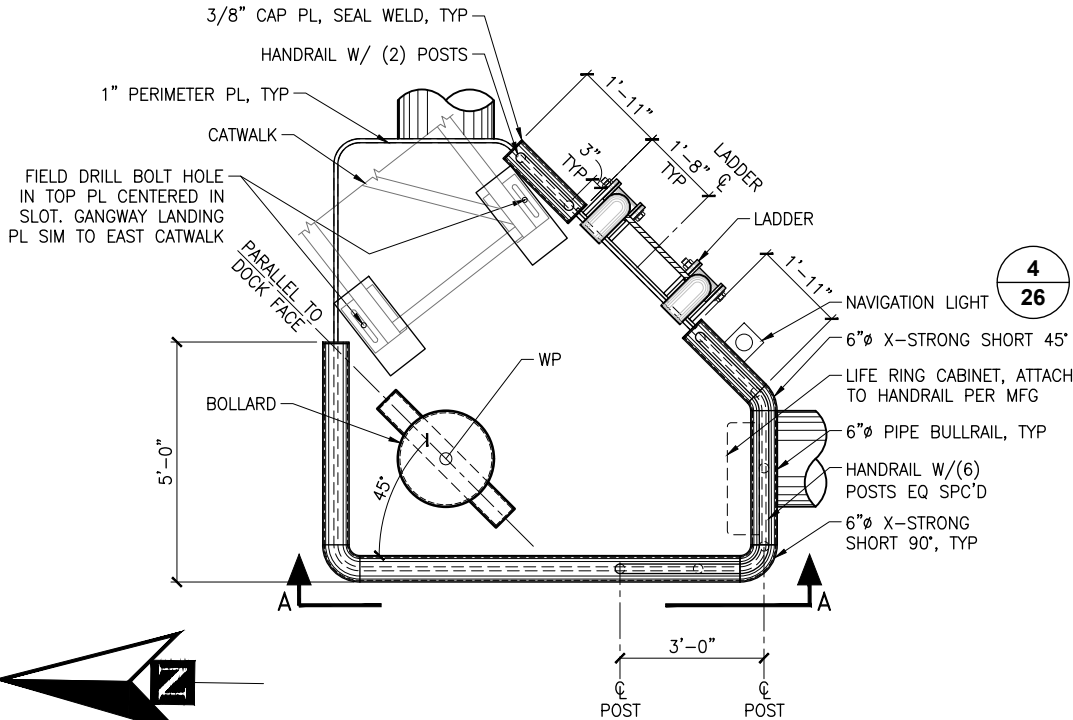
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763

SAND POINT DOCK REPLACEMENT

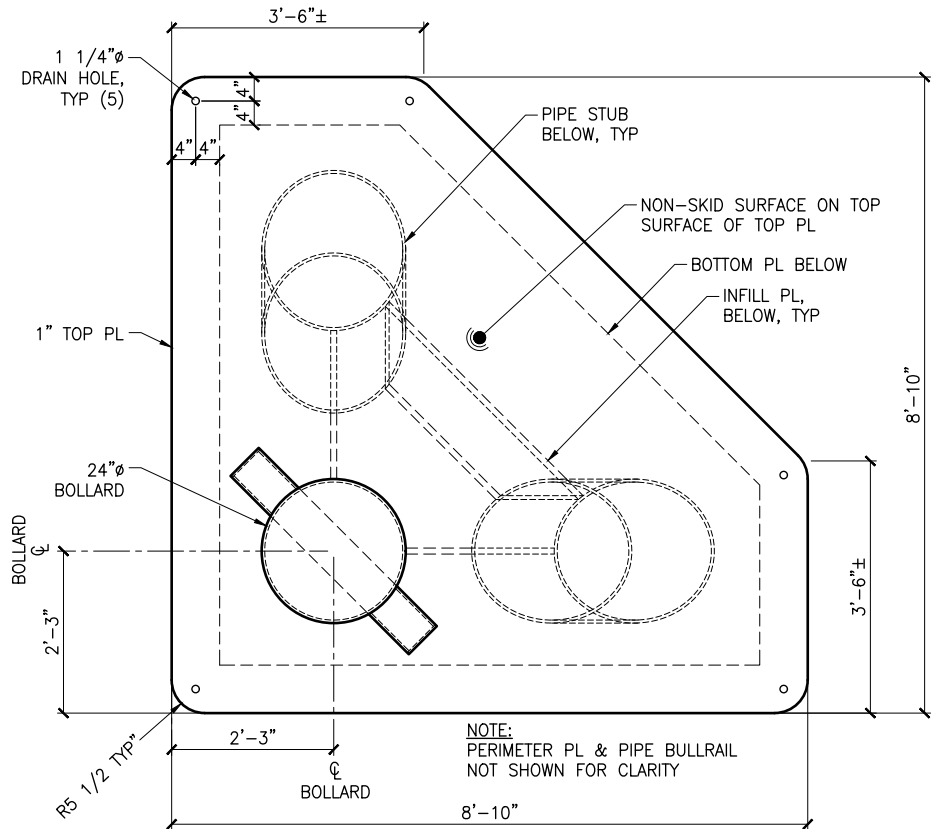
EAST CATWALK EXISTING PLATFORM DETAILS

FILE J:\2016\161019 Sand Point Dock Replacement\G. Drawings\Civil\25.26 Mooring Dolphin Details.dwg DATE 11/23/2018 8:25 LAYOUT 25 DESIGNED XXX CHECKED XXX DRAFTED XXX

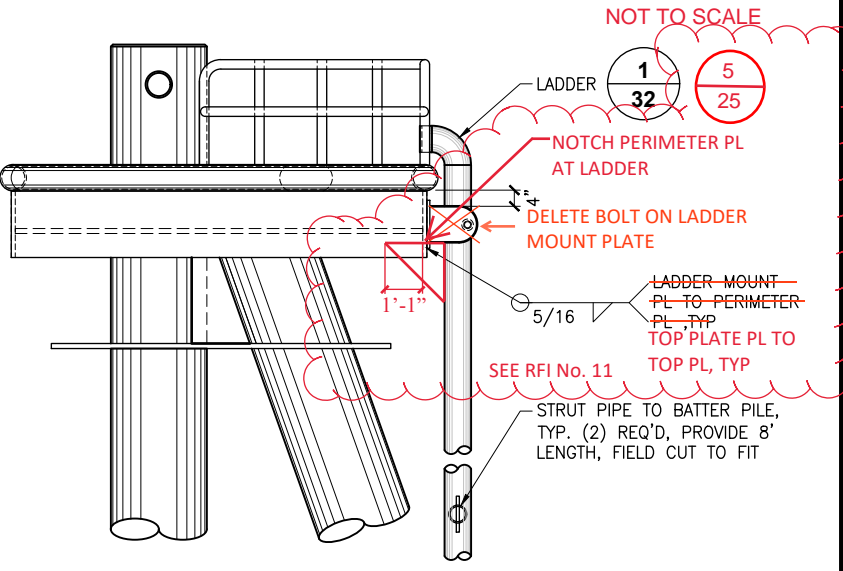
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
				SFHWHY00006	2018	25	53



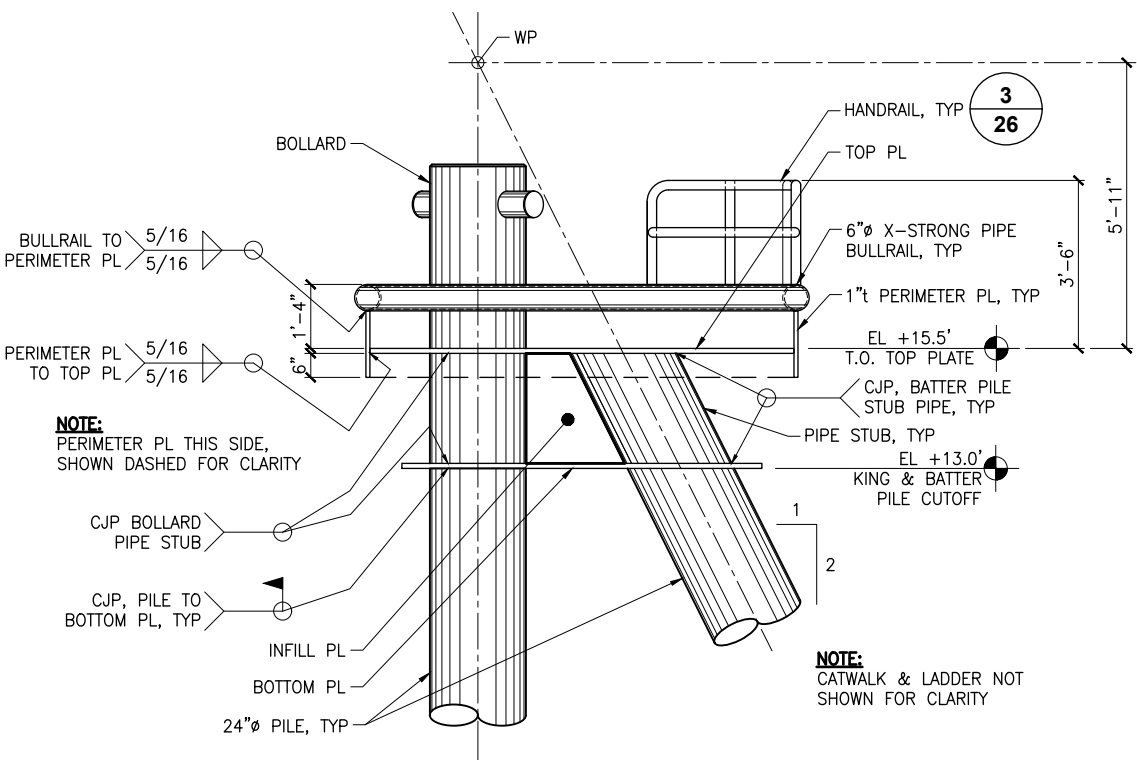
1 DOLPHIN PLAN



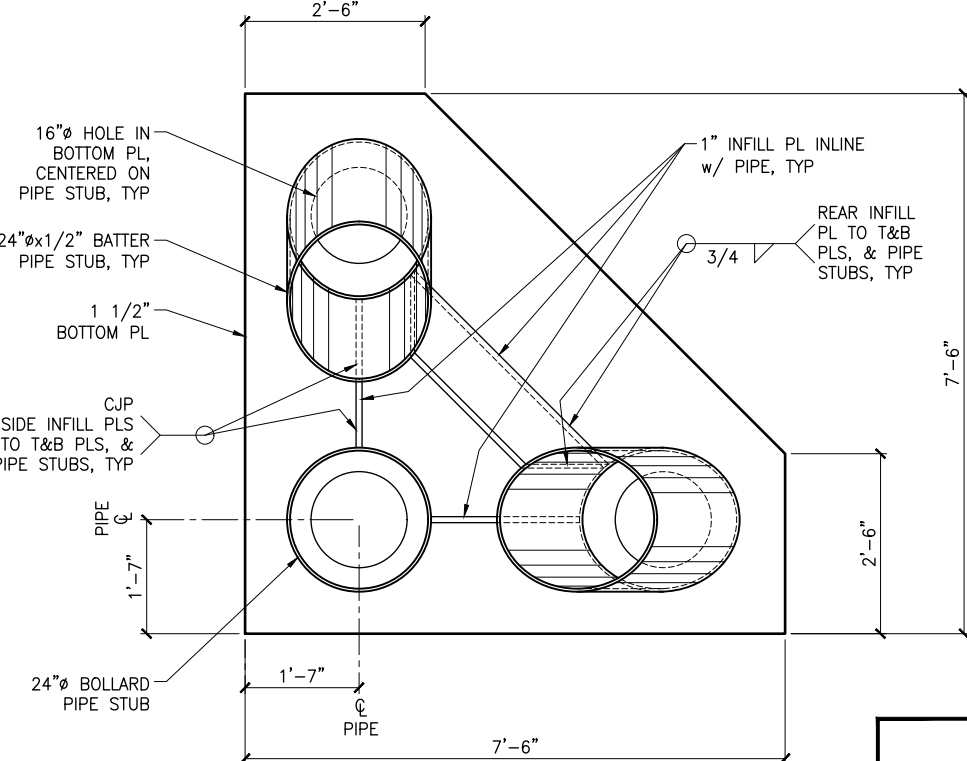
2 TOP PLATE PLAN



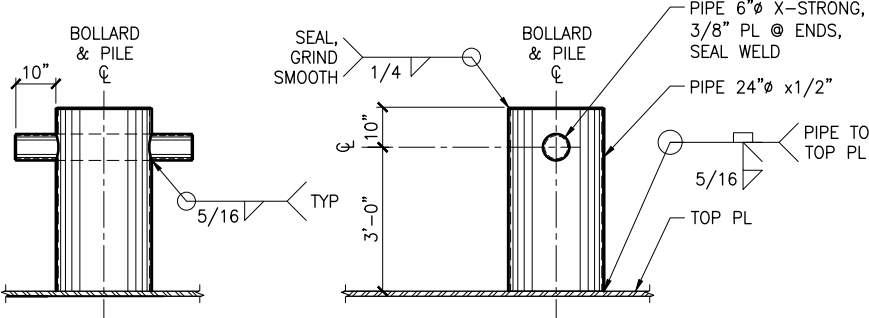
3 DOLPHIN LADDER ELEVATION



A DOLPHIN ELEVATION A-A



4 BOTTOM PLATE PLAN



5 BOLLARD DETAILS

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.
PE *Randall E. Johnston* Date: 12.02.2021

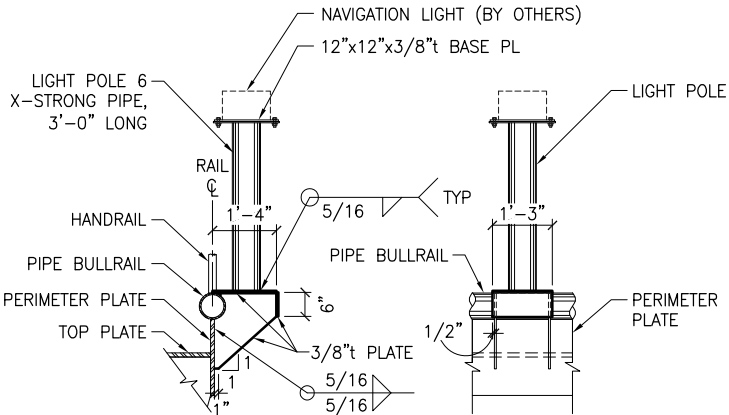
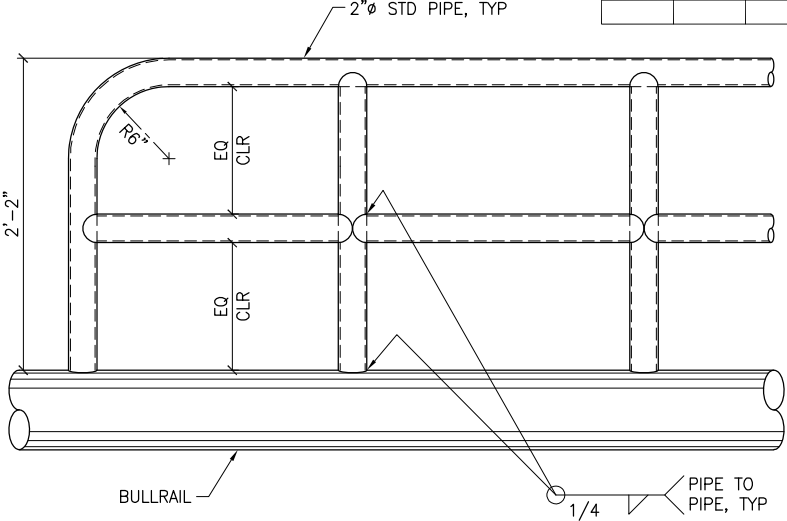
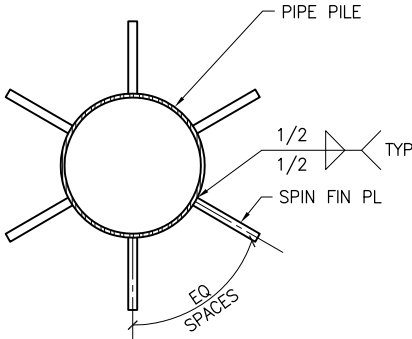
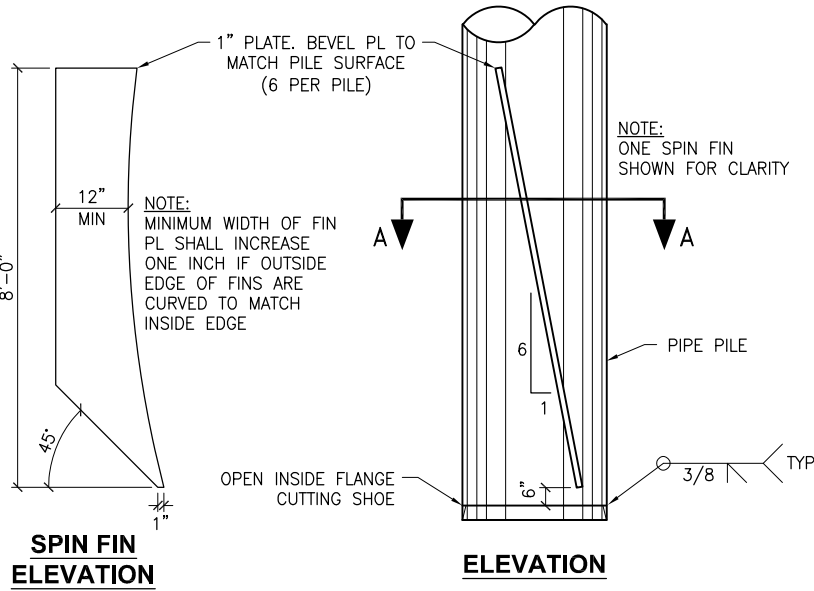
PLANS DEVELOPED BY:
PND ENGINEERS, INC.
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907-561-1011
AK. LIC# AECC250



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(907) 465-1763
SAND POINT DOCK REPLACEMENT
MOORING DOLPHIN
(1 OF 2)

FILE J:\2016\161019 Sand Point Dock Replacement\G. Drawings\Civil\10x 25_26 Mooring Dolphin Details-Draft\ed/29/2021.dwg: 15 LAYOUT 26 DESIGNED XXX CHECKED XXX DRAFTED XXX

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	5.29.19	RFI #11 - LADDER DETAIL		SFHWHY00006	2019	26	53



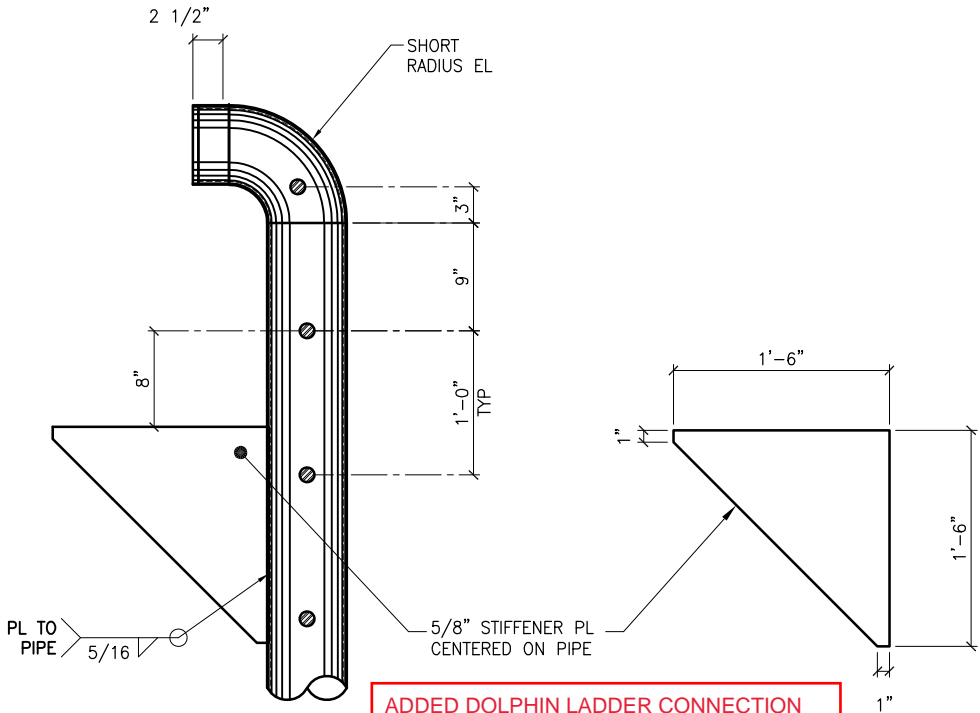
1 FIN TIP DETAILS

2 SECTION A-A

3 HANDRAIL DETAILS

4 NAVIGATION LIGHT DETAILS

NOTE:
SEE PILE DETAILS SHEET 13 FOR PILE SPLICE DETAIL



ADDED DOLPHIN LADDER CONNECTION
DETAIL PROVIDED BY PND WHICH WAS
NOT INCORPORATED IN ORIGINAL PLANS.
SEE RFI No. 11

5 DOLPHIN LADDER CONNECTION

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021

PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
AK. LIC# AECC250

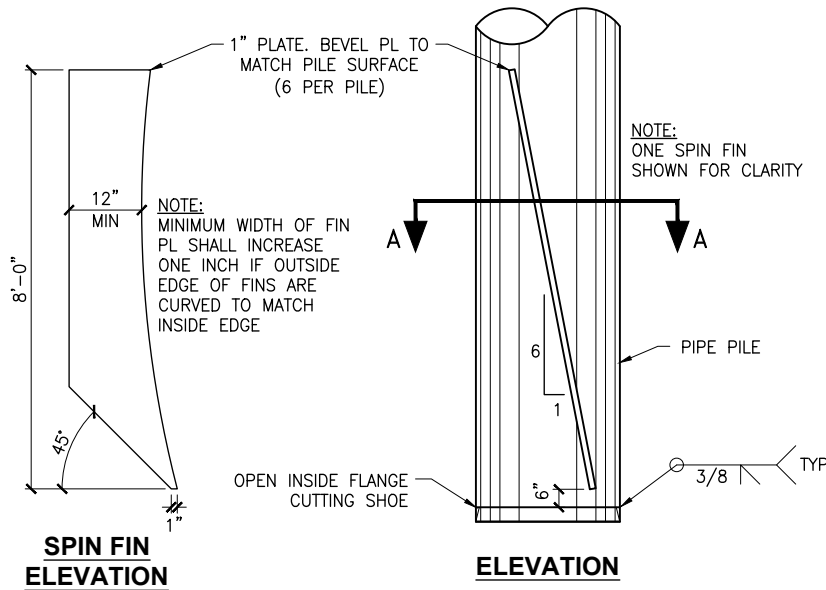
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763

SAND POINT DOCK REPLACEMENT

MOORING DOLPHIN
(2 OF 2)

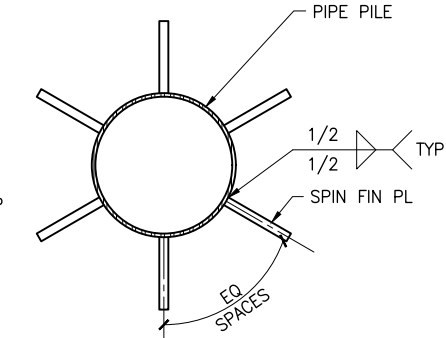
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
				SFHWY00006	2018	26	53

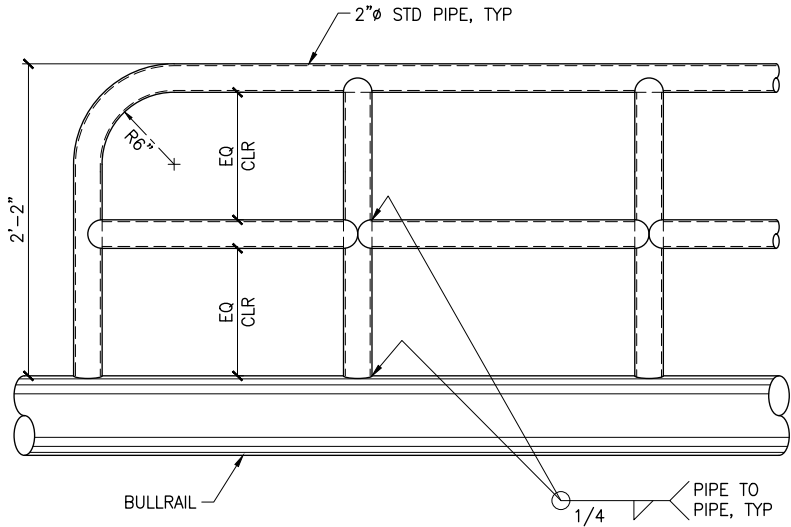


1 FIN TIP DETAILS

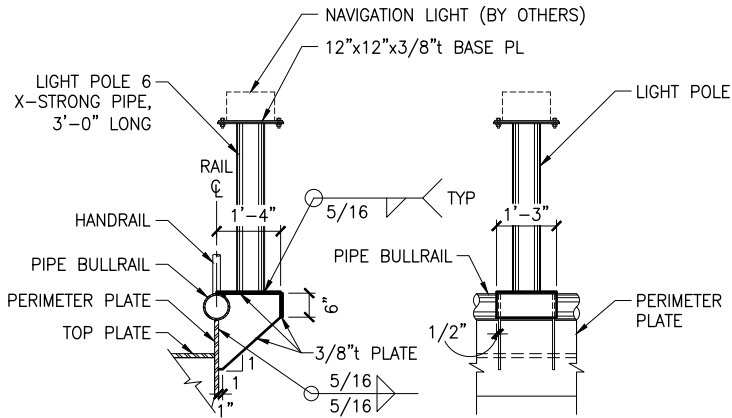
NOTE:
SEE PILE DETAILS SHEET 13 FOR PILE SPLICE DETAIL



2 SECTION A-A



3 HANDRAIL DETAILS



4 NAVIGATION LIGHT DETAILS

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston* Date: 12.02.2021

PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
AK. LIC# AECC250

11/23/18

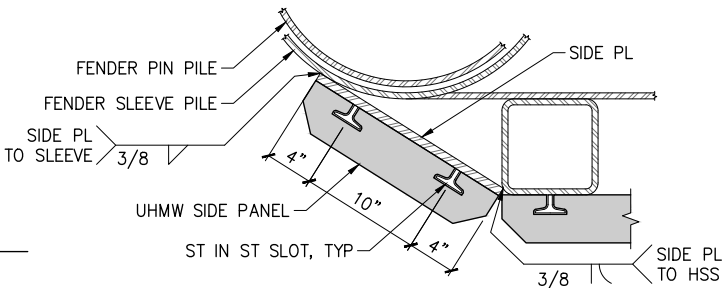
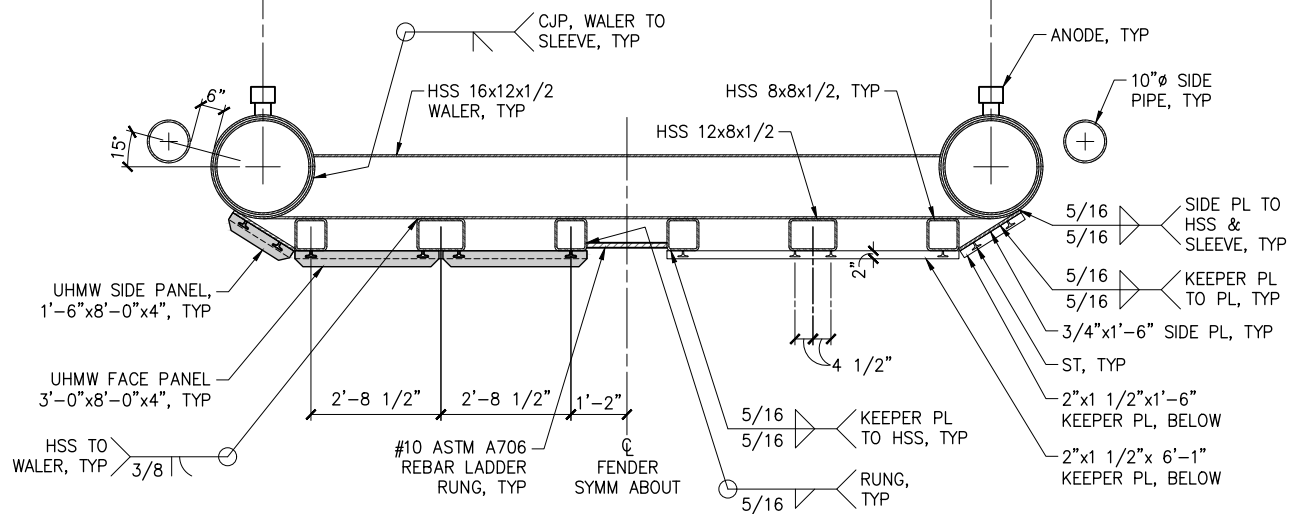
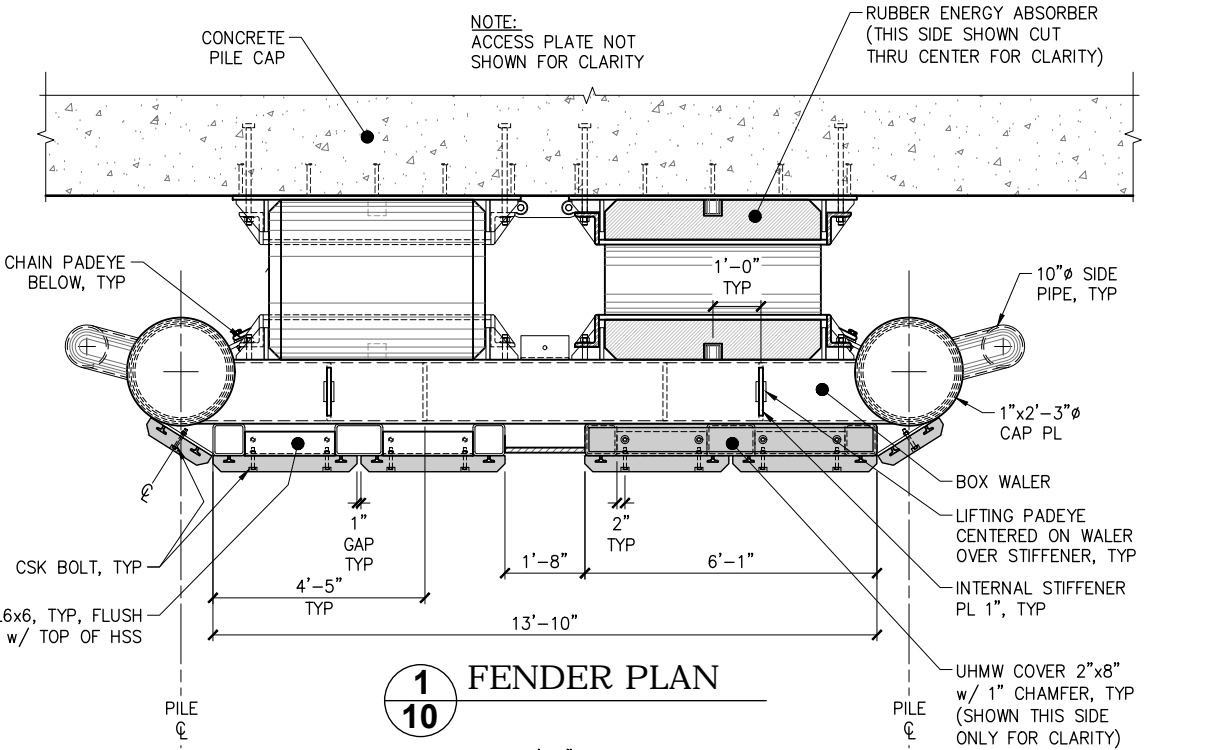
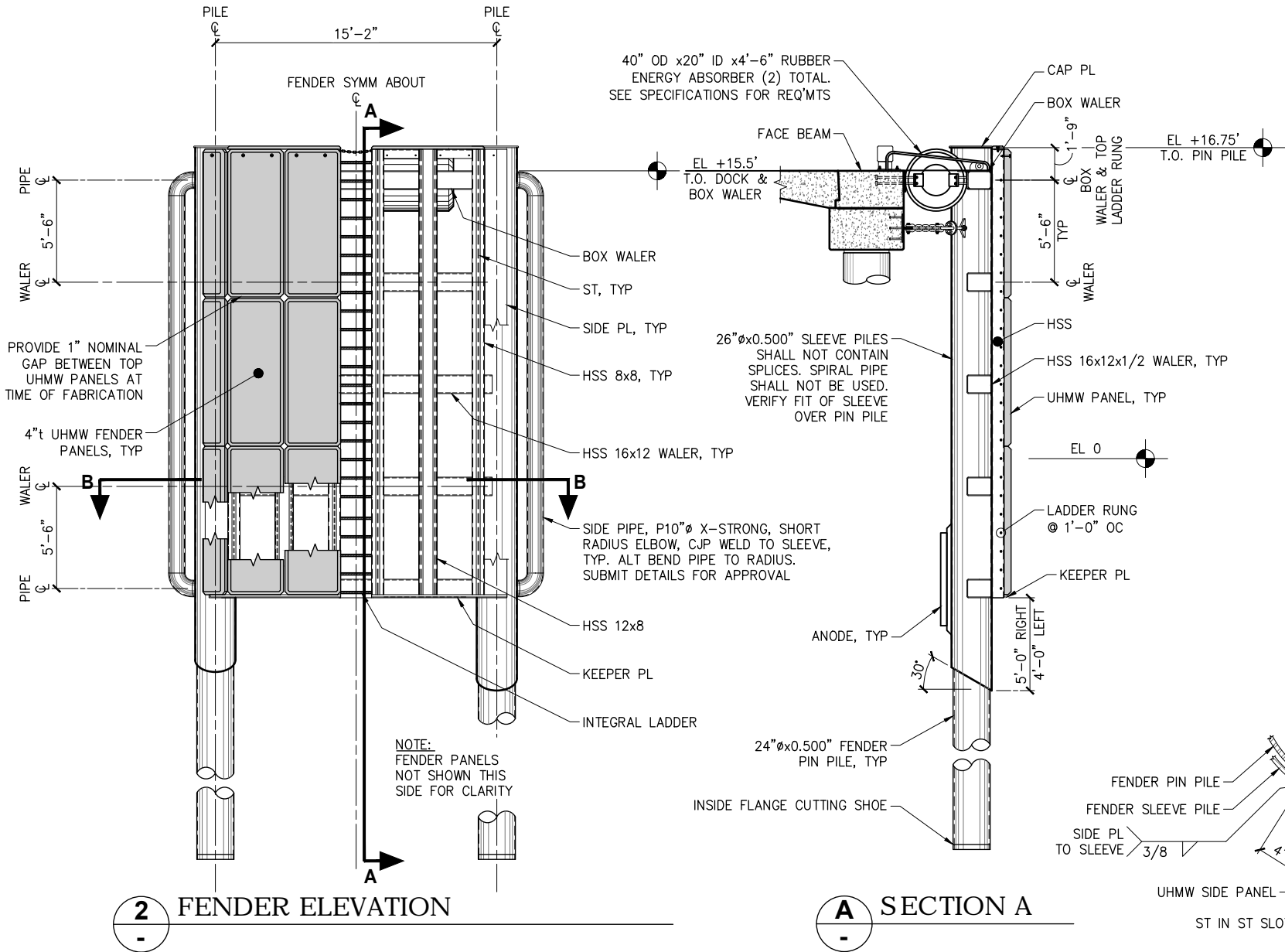
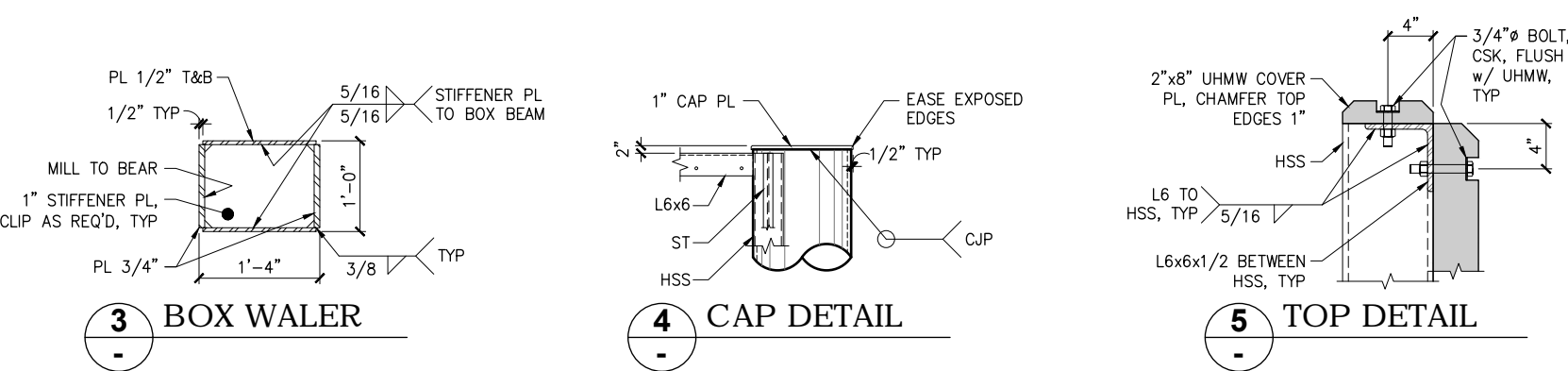
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763

SAND POINT DOCK REPLACEMENT

MOORING DOLPHIN
(2 OF 2)

FILE J:\2016\161019 Sand Point Dock Replacement\G. Drawings\Civil\2729 Fender Details.dwg DATE 11/21/2018 14:49 LAYOUT 27 DESIGNED XXX CHECKED XXX DRAFTED XXX

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
				SFHwy00006	2018	27	53



B SECTION B

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.
PE *Randall C. Johnston* Date: 12.02.2021

SHEET NOTES

- RUBBER ENERGY ABSORBER MUST BE HELD BY CLAMPS IN A POSITION CENTERED ON SUPPORTS AND WALERS. BOLTS FOR CLAMPS SHALL HAVE LONG THREAD LENGTHS CAPABLE OF TIGHTENING UNTIL RUBBER IS DEFORMED AROUND CLAMPS AS APPROVED BY THE ENGINEER. BOLTS SHALL BE TIGHTENED IN AN ALTERNATING SEQUENCE SUCH THAT THE CLAMP IS EVENLY TIGHT IN FINAL POSITION. AFTER TIGHTENING, A SECOND NUT SHALL BE INSTALLED AGAINST THE FIRST NUT.
- WELD ALL COMPONENT JOINTS W/ 5/16" FILLET WELD OR EQUIVALENT SEAL WELD ALL AROUND OR AS OTHERWISE DETAILED.

PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
AK. LIC# AECC250

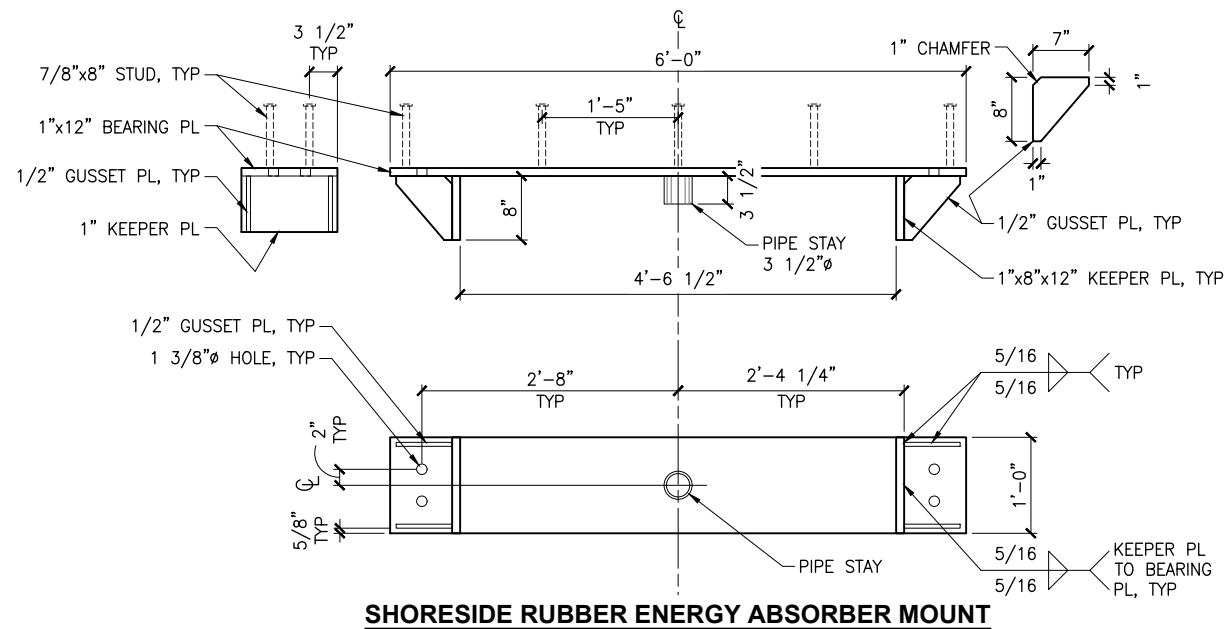


STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763

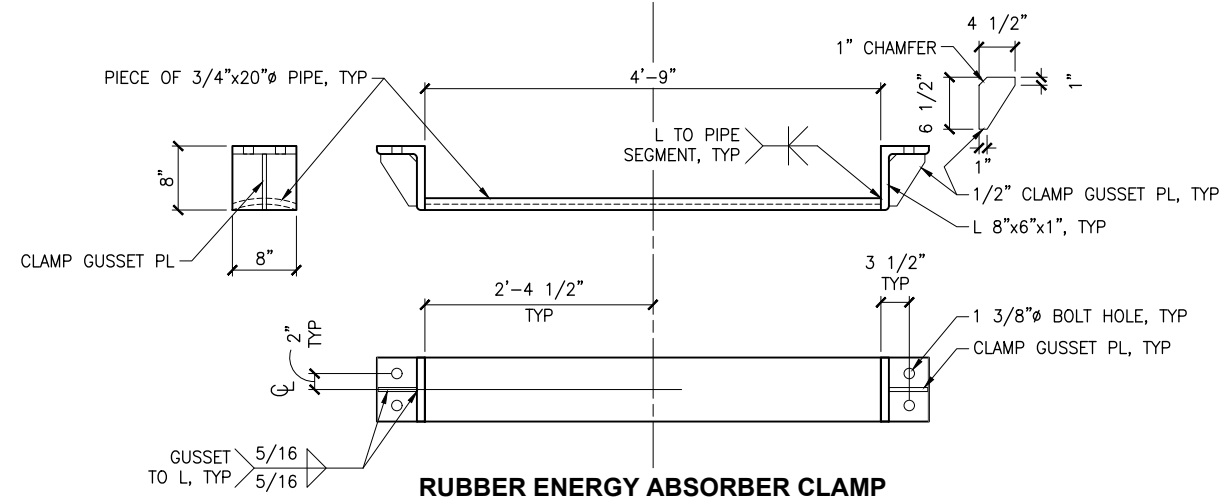
SAND POINT DOCK REPLACEMENT

FENDER DETAILS
(1 OF 3)

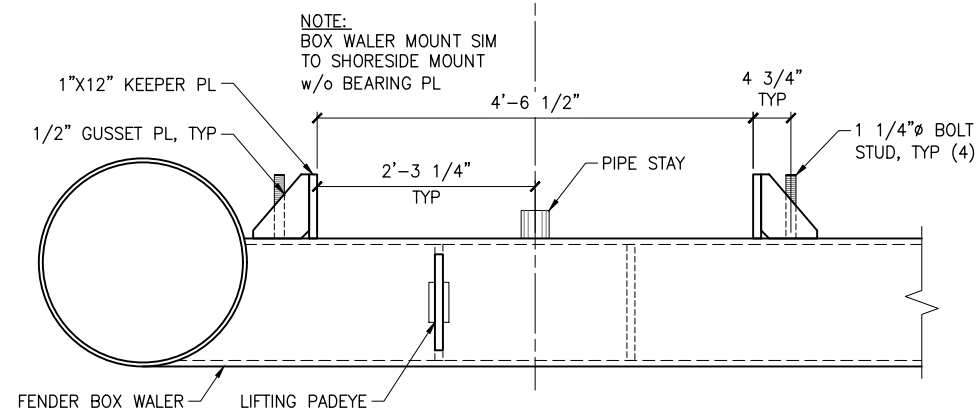
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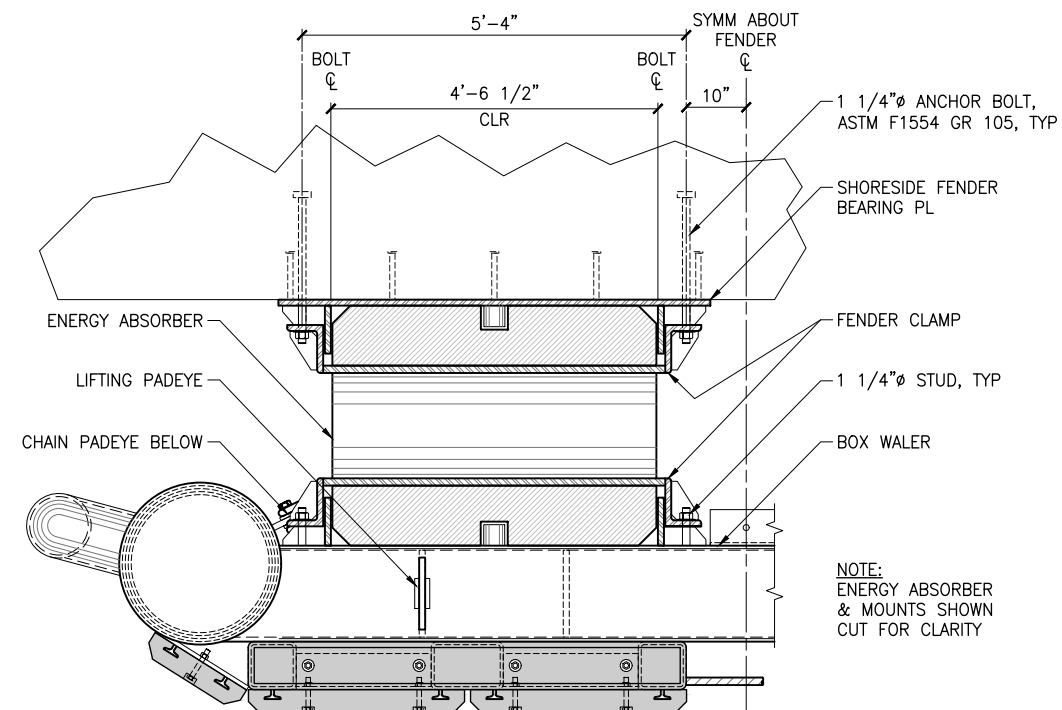
SHORESIDE RUBBER ENERGY ABSORBER MOUNT



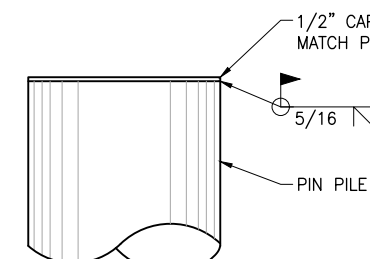
RUBBER ENERGY ABSORBER CLAMP



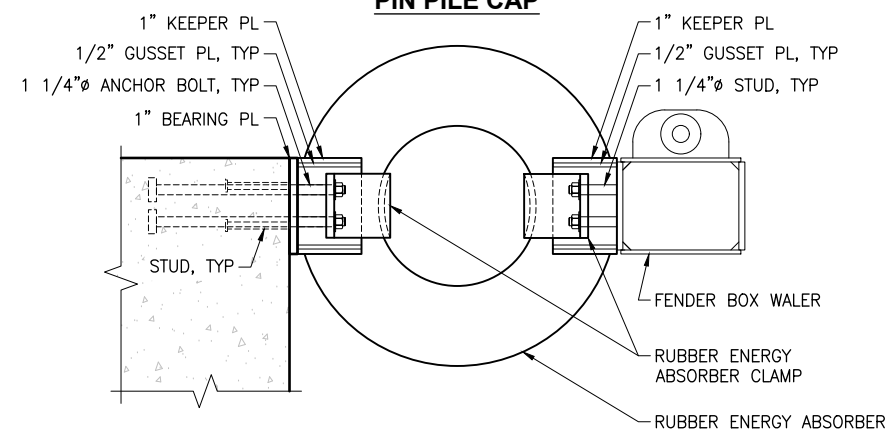
BOX WALER RUBBER ENERGY ABSORBER MOUNT



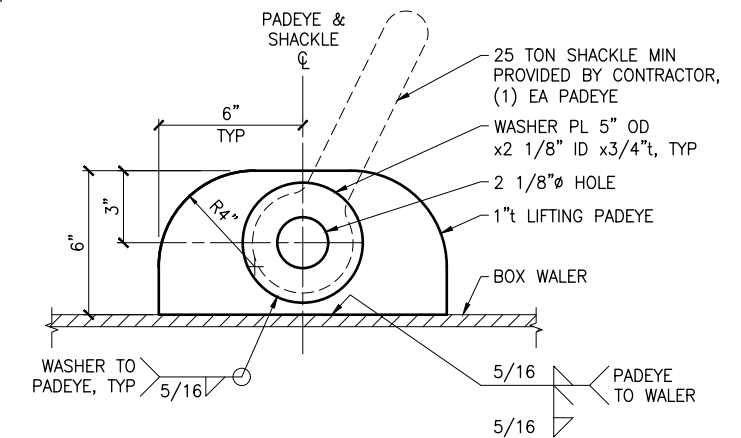
2 FENDER ATTACHMENT DETAILS



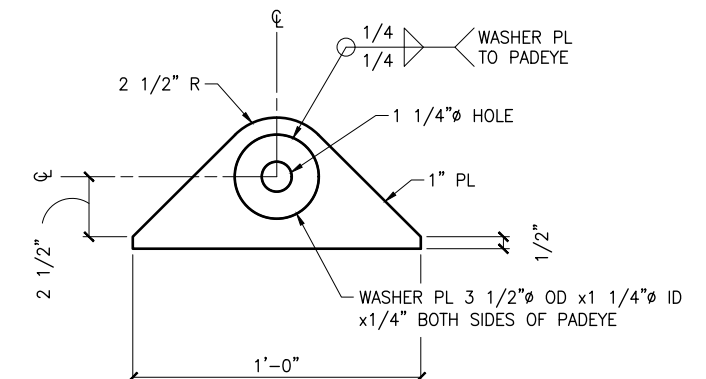
PIN PILE CAP



ENERGY ABSORBER MOUNT SIDE ELEVATION



3 LIFTING PADEYE



4 CHAIN PADEYE

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021

1 FENDER ENERGY ABSORBER MOUNT DETAILS

PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
AK. LIC# AECC250



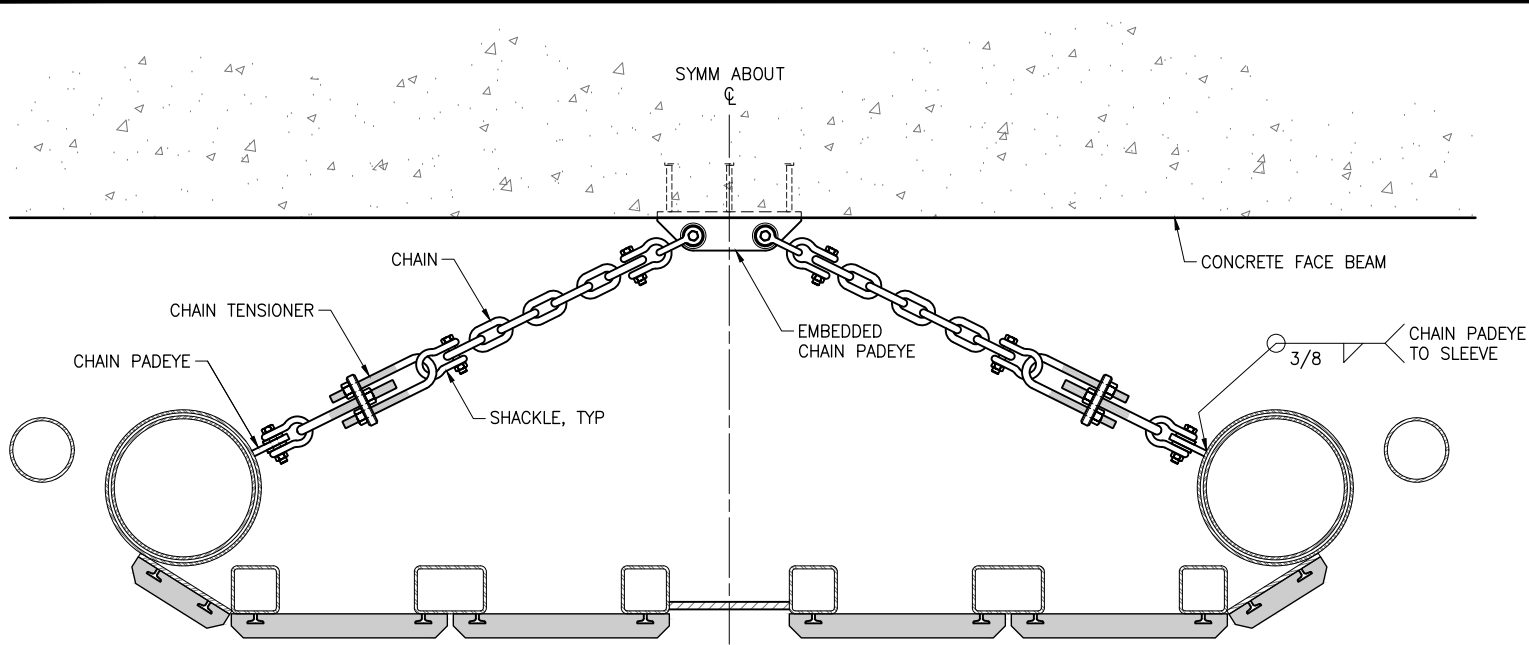
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763

SAND POINT DOCK REPLACEMENT

FENDER DETAILS
(2 OF 3)

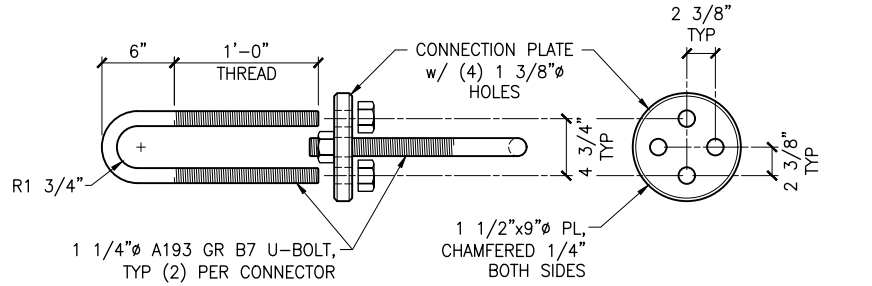
FILE J:\2016\161019 Sand Point Dock Replacement\G. Drawings\Civil\27_29 Fender Details.dwg DATE 11/21/2018 14:49 LAYOUT 29 DESIGNED XXX CHECKED XXX DRAFTED XXX

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
				SFHWY00006	2018	29	53

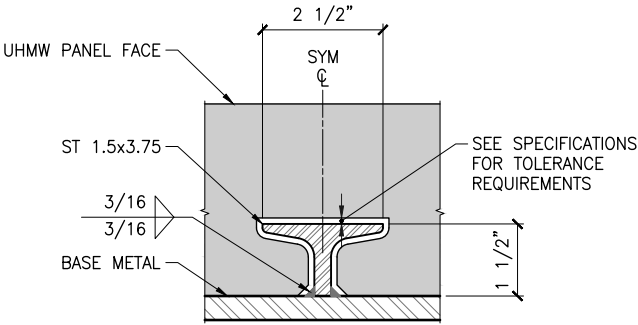


A CHAIN TENSIONER ATTACHMENT SECTION

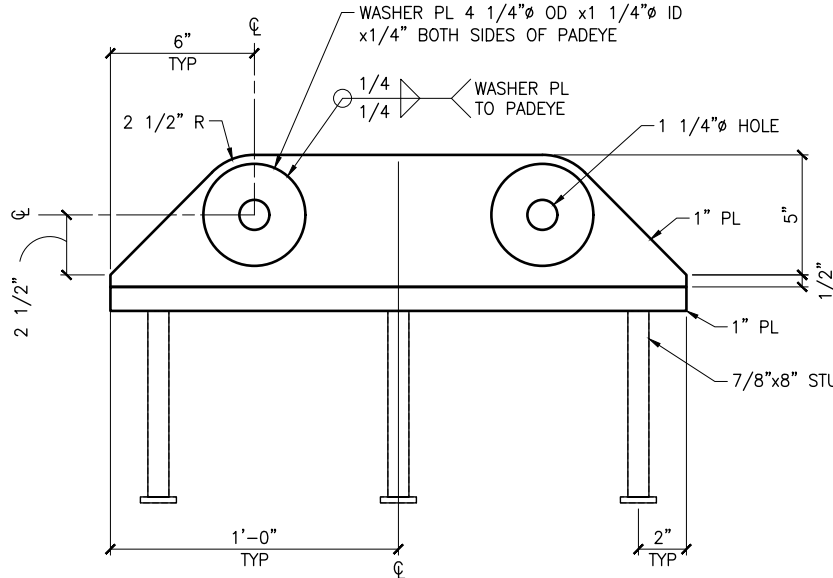
Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.
PE *Randall E. Johnston* Date: 12.02.2021



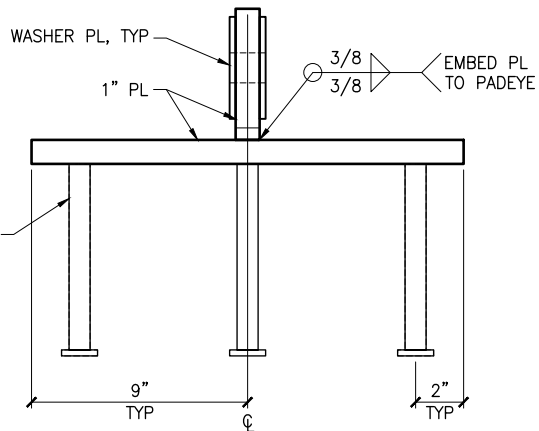
1 CHAIN TENSIONER DETAILS



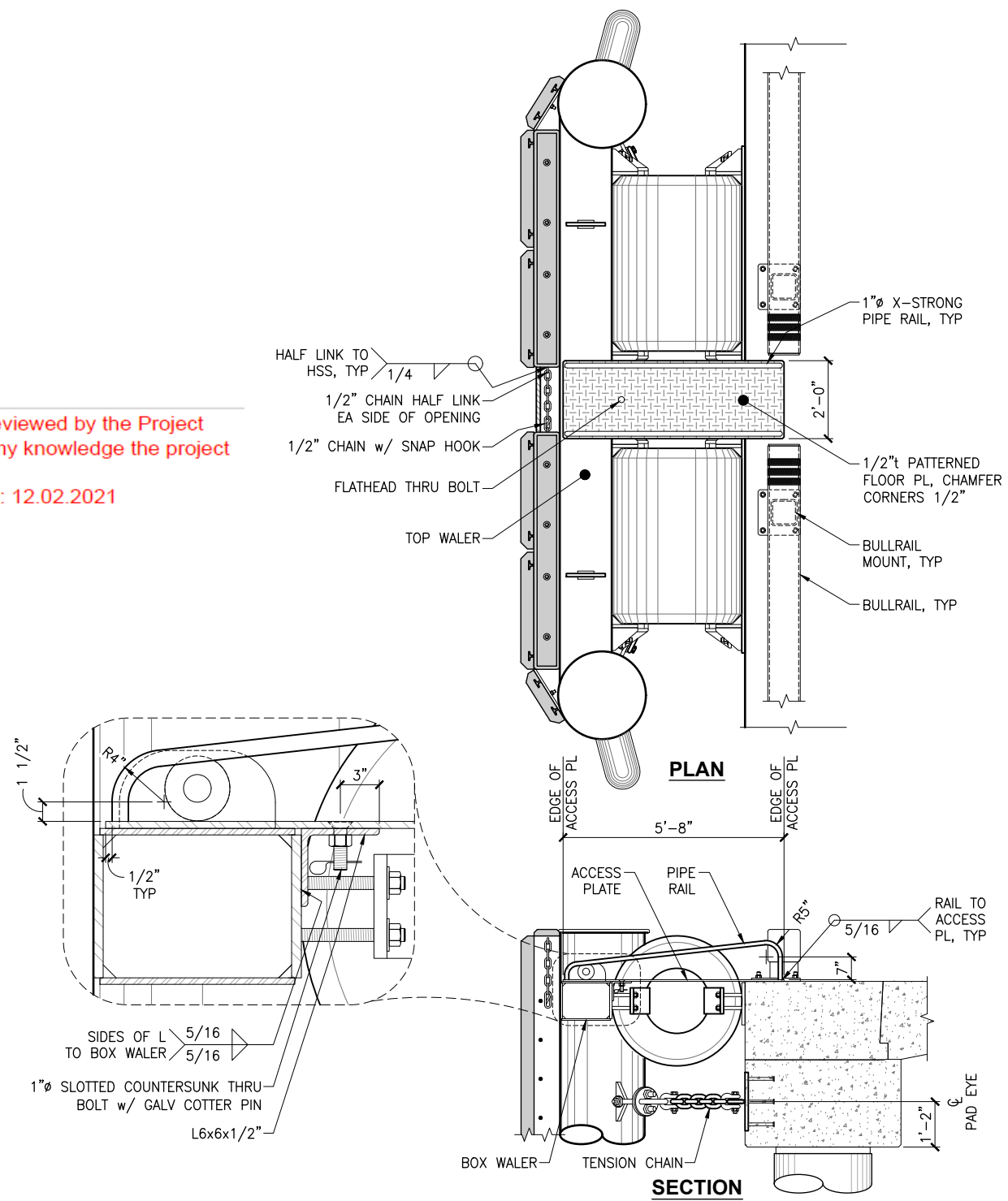
2 TEE SLOT MOUNT



3 EMBEDDED CHAIN PADEYE



4 FENDER ACCESS PLATE



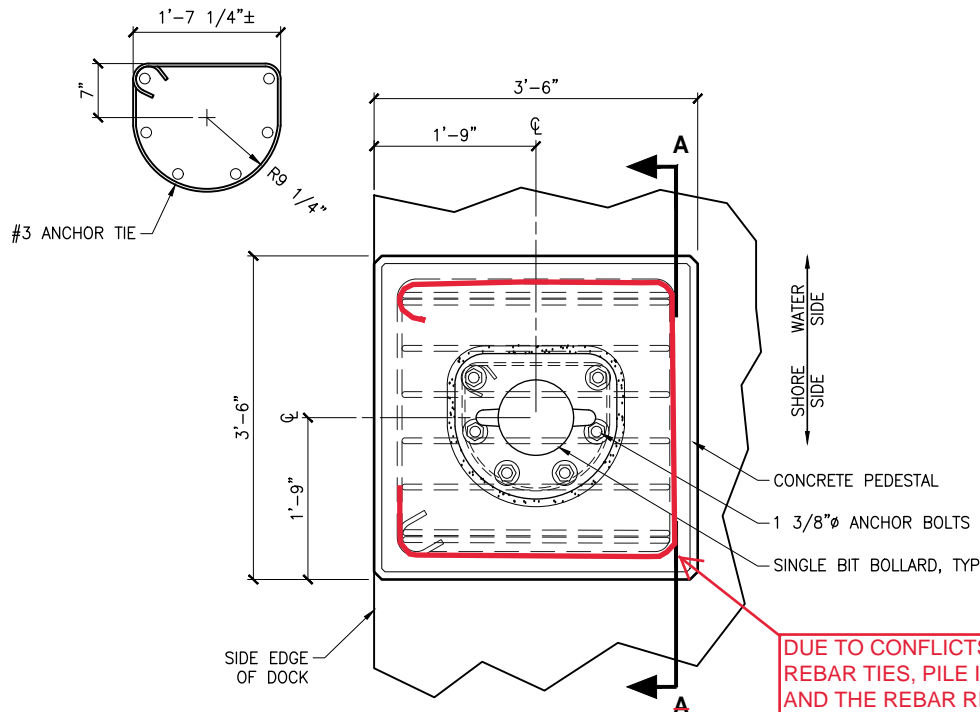
PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
AK. LIC# AECC250



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763
SAND POINT DOCK REPLACEMENT
FENDER DETAILS
(3 OF 3)

FILE J:\2016\161019 Sand Point Dock Replacement\G. Drawings\Civil\30 Bollard Details.dwg DATE 11/23/2018 8:51 LAYOUT 30 DESIGNED XXX CHECKED XXX DRAFTED XXX

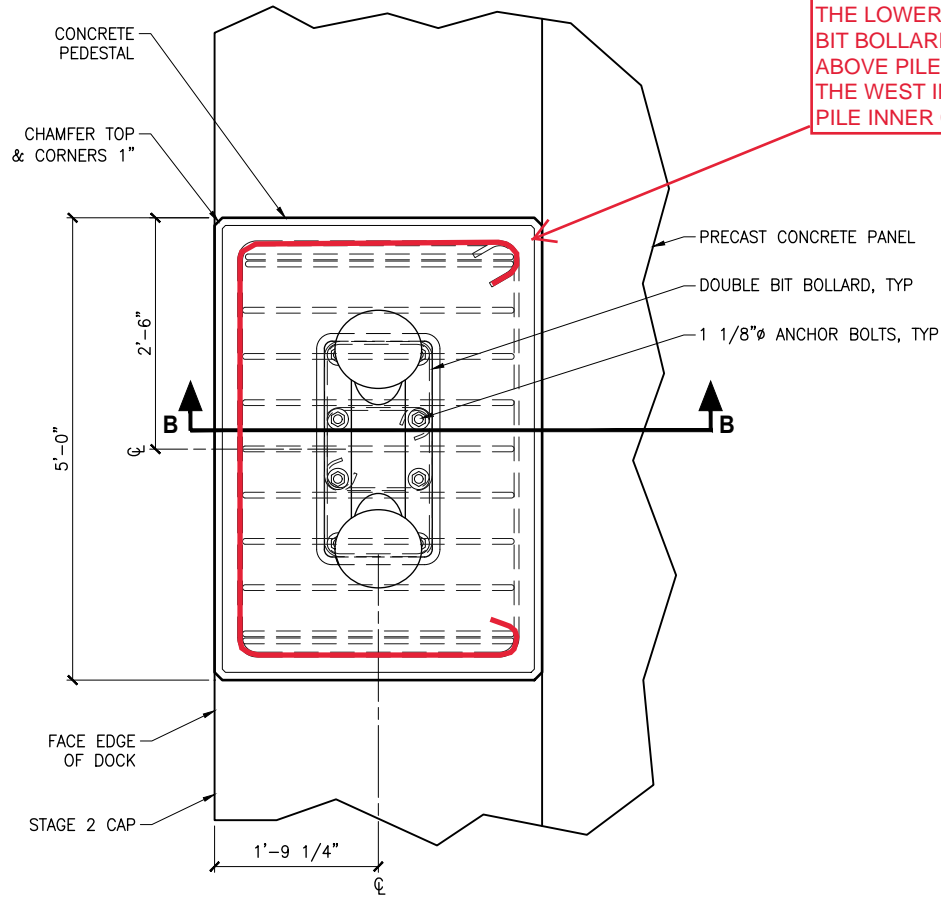
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
				SFHWY00006	2018	30	53



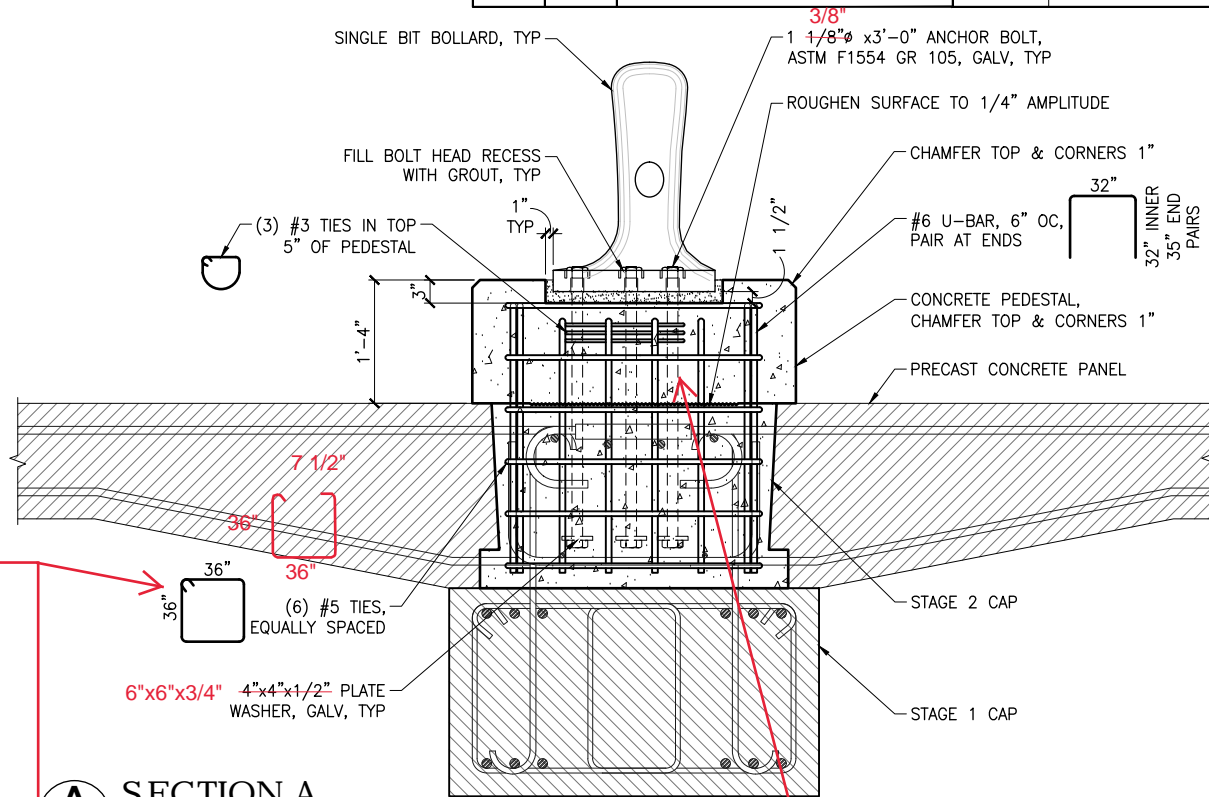
1
10
TYPICAL SINGLE BIT BOLLARD PLAN

DUE TO CONFLICTS BETWEEN REBAR TIES, PILE INNER CAGES, AND THE REBAR REINFORCEMENT THE 3 LOWER #5 TIES FOR ALL BOLLARDS WERE MODIFIED AS PICTURED TO ALLOW THE REBAR TIES TO BE INSERTED FROM THE EDGE OF THE DOCK.

THE LOWER THREE TIES DOUBLE BIT BOLLARD THAT IS LOCATED ABOVE PILE D8 WERE MOVED 6" TO THE WEST IN ORDER TO CLEAR THE PILE INNER CAGE.

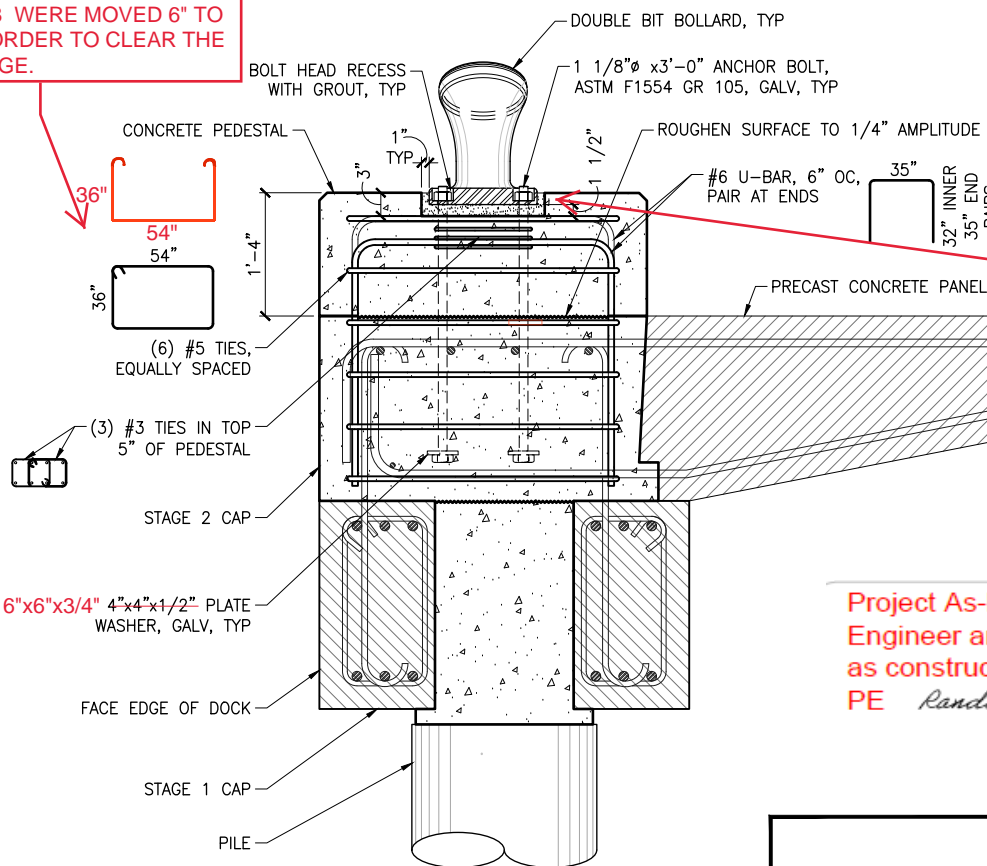


1
10
TYPICAL DOUBLE BIT BOLLARD PLAN



A
SECTION A

ANCHOR BOLT LENGTH'S VERY DUE TO CONFLICTING CONCRETE REINFORCEMENT. SEE RFI No. (INSERT) AND ANCHOR BOLT MODIFICATION DIAGRAM ON THE FOLLOWING PAGE.



B
SECTION B

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.
PE *Randall E. Johnston* Date: 12.02.2021

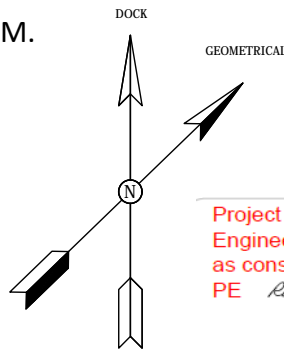
PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
AK. LIC# AECC250



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763
SAND POINT DOCK REPLACEMENT
BOLLARD DETAILS

BOLLARD ANCHOR BOLT MODIFICATION DIAGRAM.

PROJECT DESIGNATION
SFHWY00006

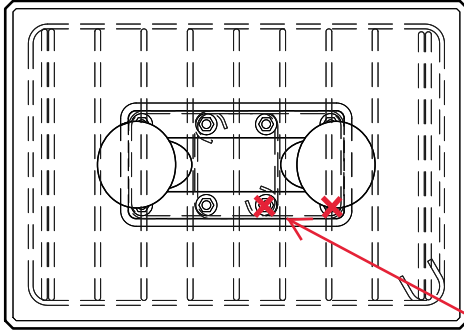


Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

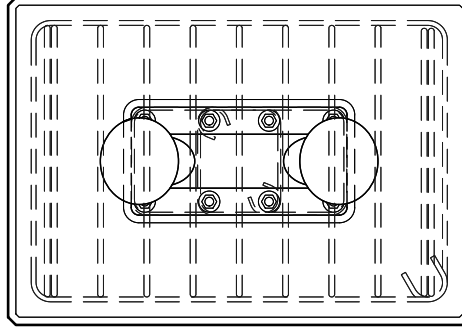
PE *Randall E. Johnston*

Date: 12.02.2021

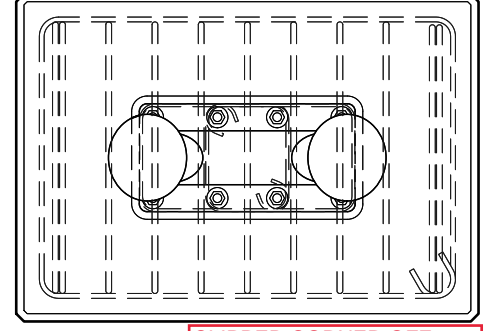
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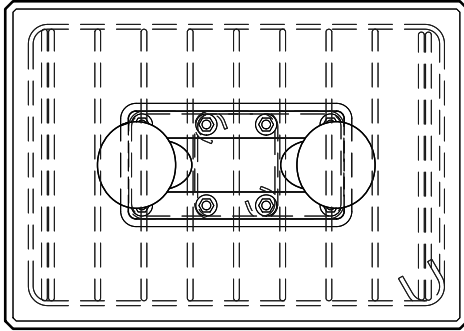
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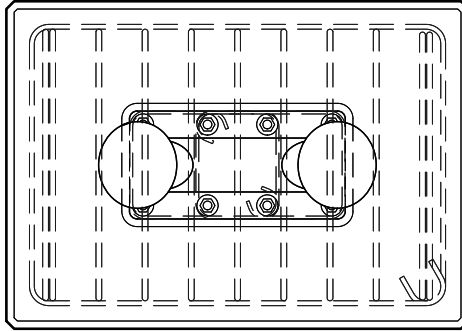
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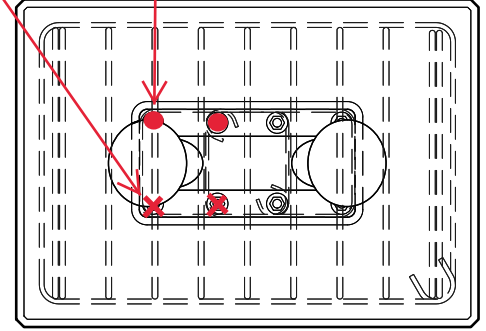
No. 4



No. 5



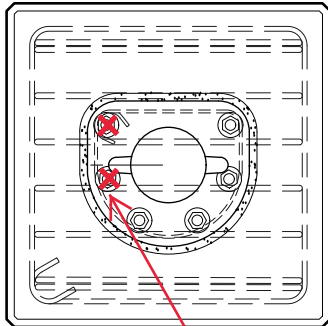
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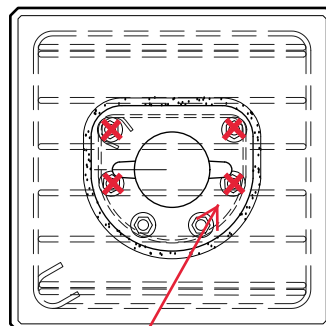
REPLACED 1 1/8" X 3'-0"
ANCHOR BOLTS WITH 1 3/8" X
1'-6" ALL THREAD ROD**

CLIPPED CORNER OFF
PLATE WASHERS DUE TO
CONFLICT WITH
REINFORCING REBAR

WEST



EAST

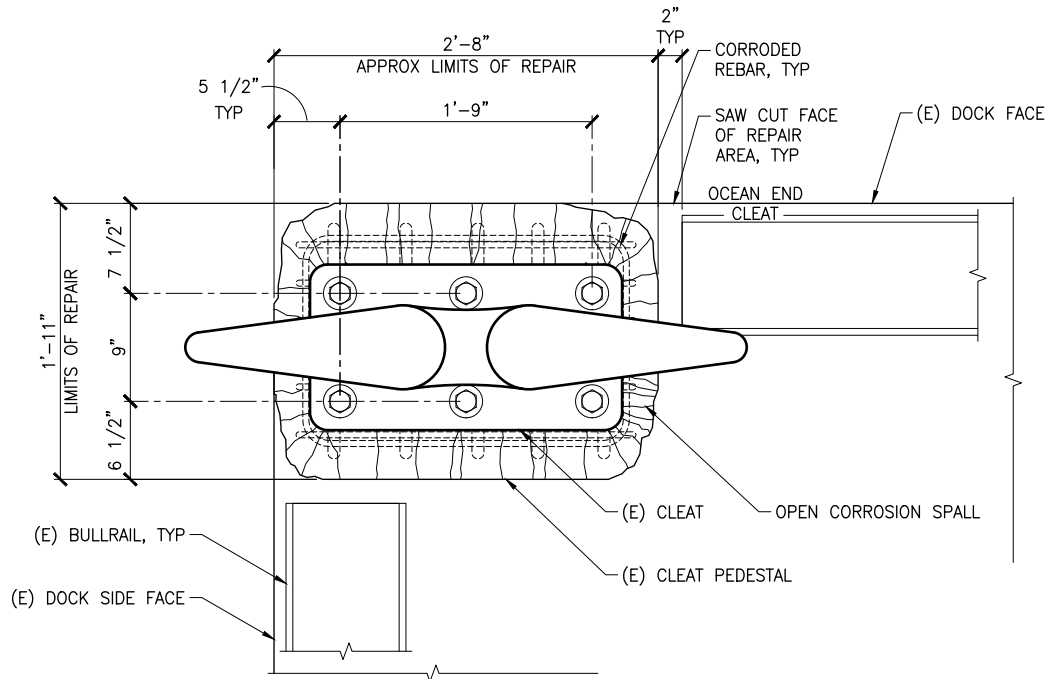


REPLACED 1 3/8" X 3'-0"
ANCHOR BOLTS WITH 1 3/8" X
1'-6" ALL THREAD ROD

*BOLLARDS ARE NUMBERED WEST TO EAST
**MEETING THE REQUIRMENTS OF ASTM F 1554, GR 105, GAL. - DOMESTIC.

FILE J:\2016\161019 Sand Point Dock Replacement\G. Drawings\Civil\31 Cleet Repair Details.dwg DATE 11/23/2018 9:07 LAYOUT 31 DESIGNED XXX CHECKED XXX DRAFTED XXX

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
				SFHWY00006	2018	31	53



SITE PHOTOS

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.
PE *Randall E. Johnston* Date: 12.02.2021

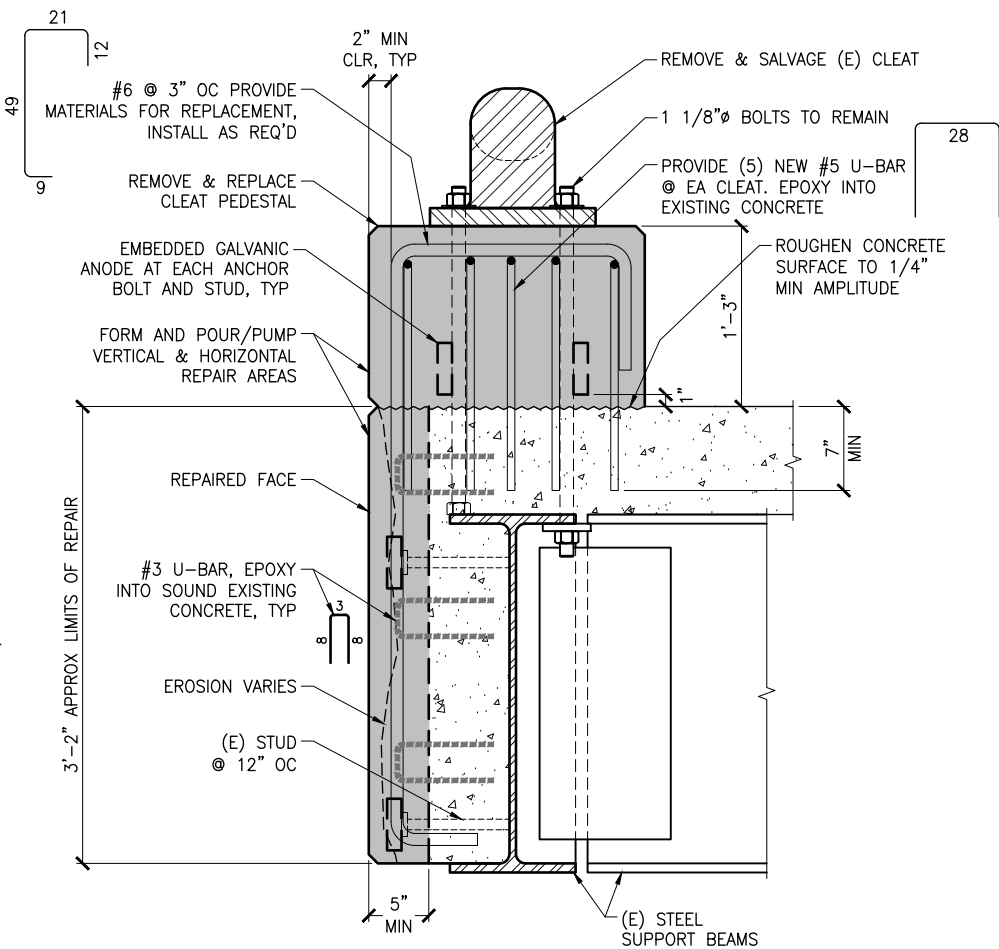
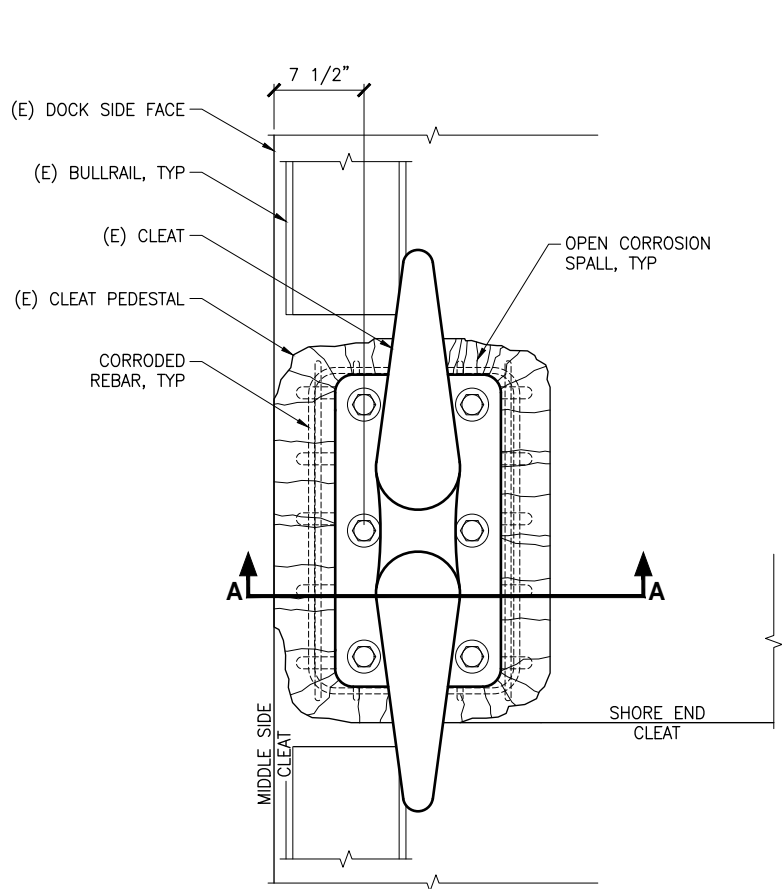
NOTES:

- ALL DIMENSIONS AND MEMBER SIZES ARE BASED ON ORIGINAL DESIGN DRAWINGS. AS-BUILT CONDITION MAY VARY.
- REPAIR EXTENTS SHOWN SHALL BE USED FOR BASE BID QUANTITIES. ACTUAL REPAIR DEPTHS AND WIDTHS SHALL BE FIELD DETERMINED USING THE BASIS DEFINED IN THE CONCRETE REMOVAL SPECIFICATIONS.
- CLEATS SHOWN ARE PROVIDED TO SHOW ALL TYPICAL DEFECTS OBSERVED AND REQUIRED REPAIRS.
- REMOVE AND RECOVER ANY CONNECTING UTILITIES/CONDUITS AS REQUIRED TO PERFORM WORK. REINSTALL FOLLOWING COMPLETION.

SEE CLEAT REPAIR AS-BUILT DRAWING ON THE FOLLOWING PAGE FOR A DETAILED VIEW OF THE NORTH CLEAT REPAIR.

SOUTH AND CENTER CLEAT REPAIRS LIMITED TO REMOVAL OF EXISTING CONCRETE TO THE DEPTH NECESSEARY TO INSTALL GALVANIC ANODES AND NEW CONCRETE POURED TO REBUILD CLEAT PEDESTAL.

DELETED NORTHEAST CLEAT REPAIR IN ITS ENTIRETY.



1 CLEAT PLAN

A TYPICAL REPAIR SECTION

PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
AK. LIC# AECC250



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763

SAND POINT DOCK REPLACEMENT

CLEAT REPAIR DETAILS

11/23/18

NOTES:

DRAWING HAS BEEN MODIFIED FROM ORGINIAL "TYPICAL REPAIR SECTION" FOUND ON SHEET 31 OF THE CONFORMED PLANS FOR SFHWY00006 SAND POINT DOCK REPLACEMENT.

ALL ALTERATIONS MADE TO DRAWING ARE APPROXIMATE AND ARE NOT TO SCALE.

SEE RFI NO. (INSERT RFI #)

*SEE SHEET 06 CLEAT LOCATION REFERENCE.

**THREADED ROD MEETING THE REQUIREMENTS OF ASTM F 1554, GR 105, GAL. - DOMESTIC.

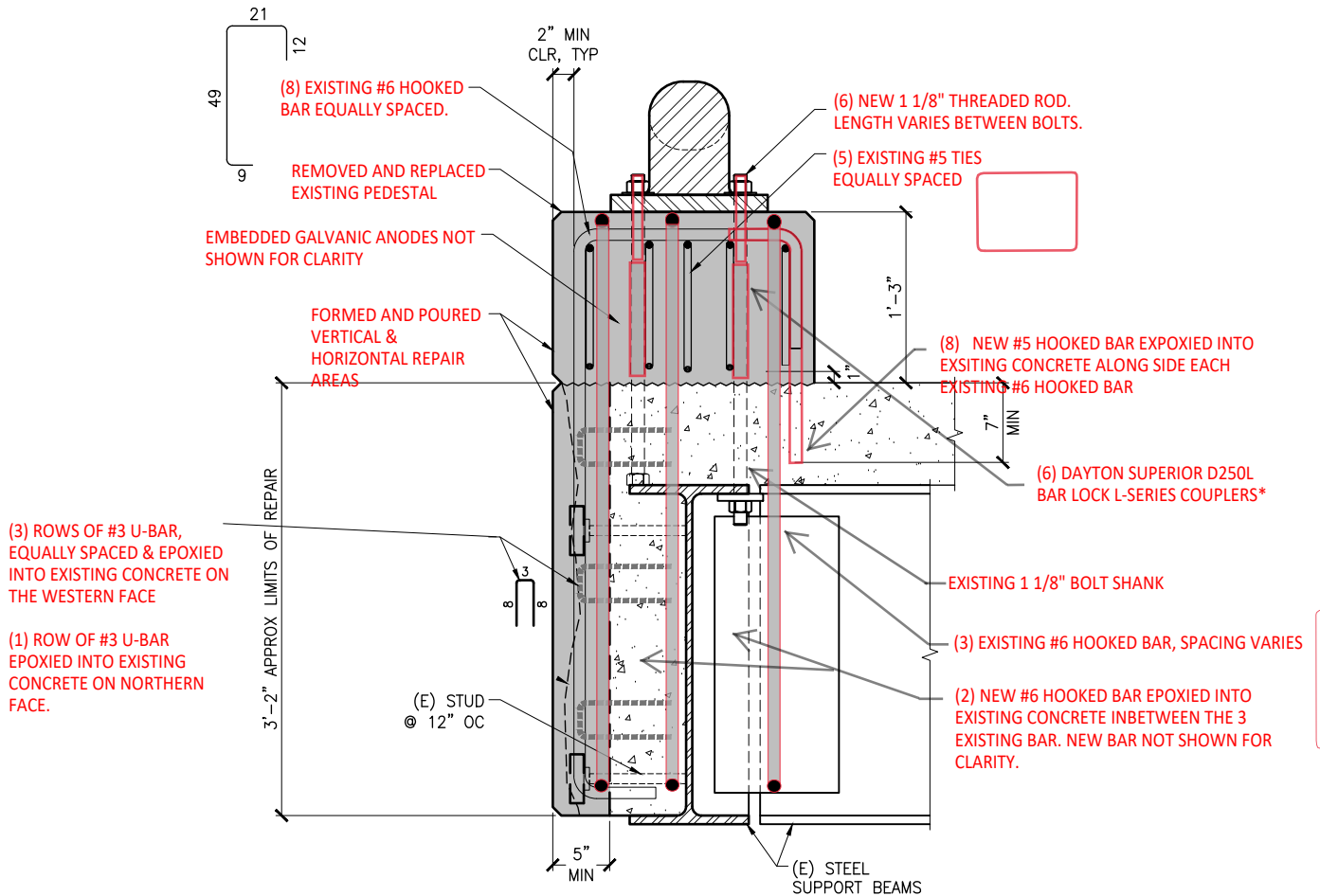
PROJECT DESIGNATION

SFWY00006

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

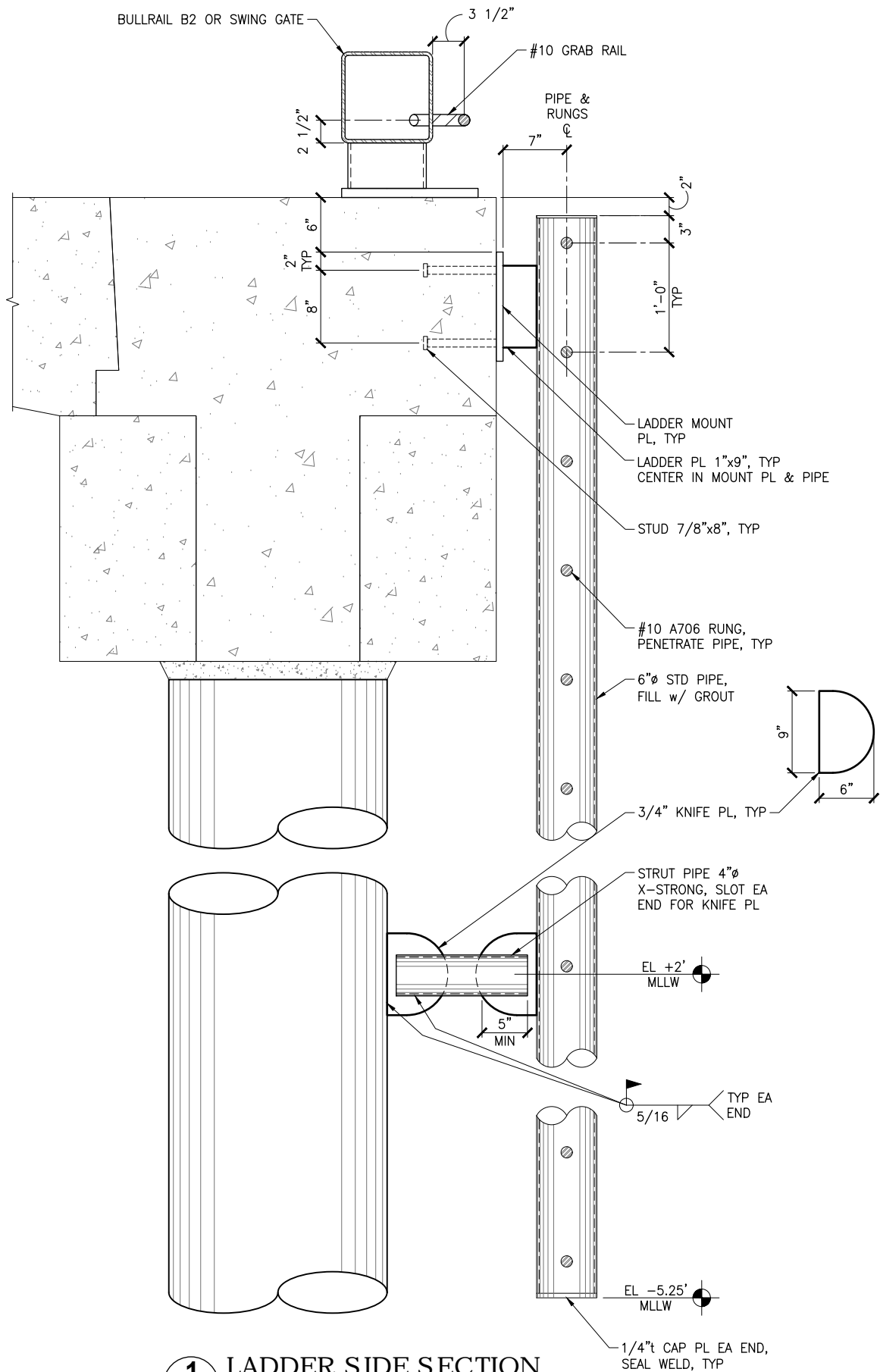
PE *Randall E. Johnston*

Date: 12.02.2021



NORTH* CLEAT REPAIR AS-BUILT

FILE J:\2016\161019 Sand Point Dock Replacement\G. Drawings\Civil\32 Ladder Details.dwg DATE 11/23/2018 9:11 LAYOUT 32 DESIGNED XXX CHECKED XXX DRAFTED XXX XXX



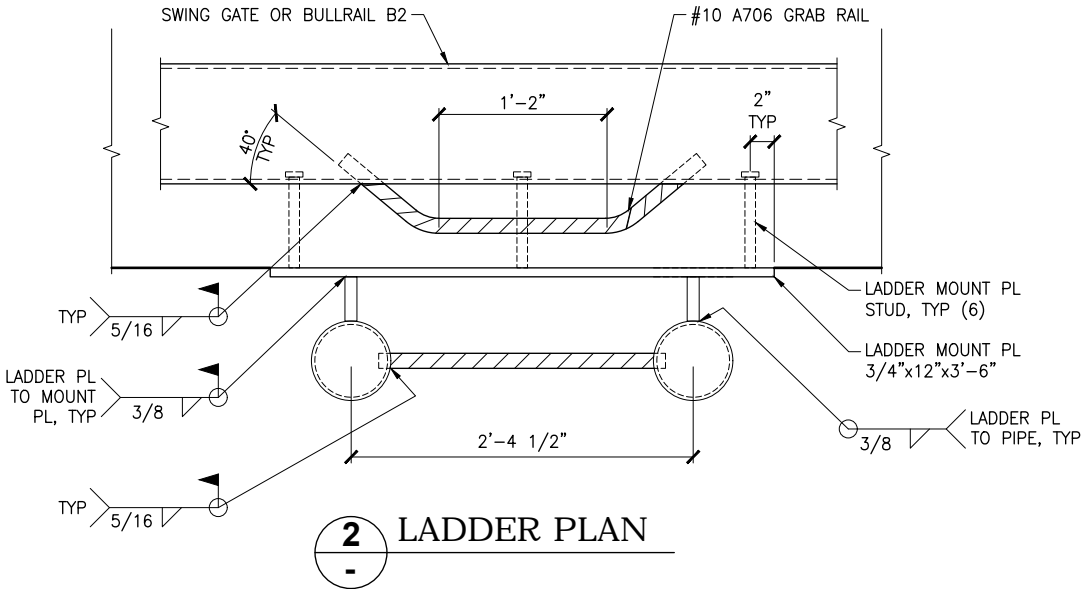
1 LADDER SIDE SECTION
10

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
				SFHWHY00006	2018	32	53

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021



2 LADDER PLAN
-

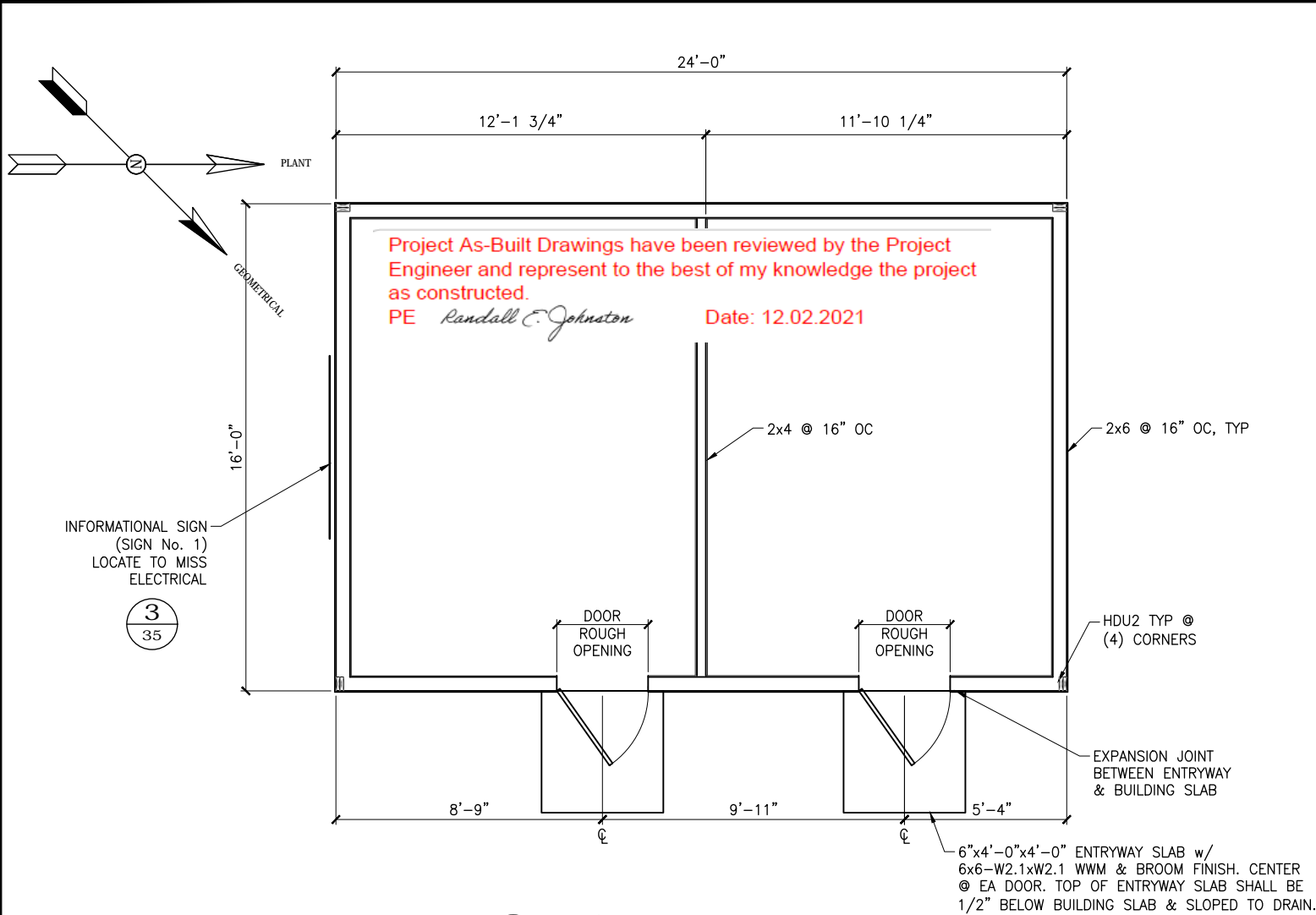
PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
AK. LIC# AECC250



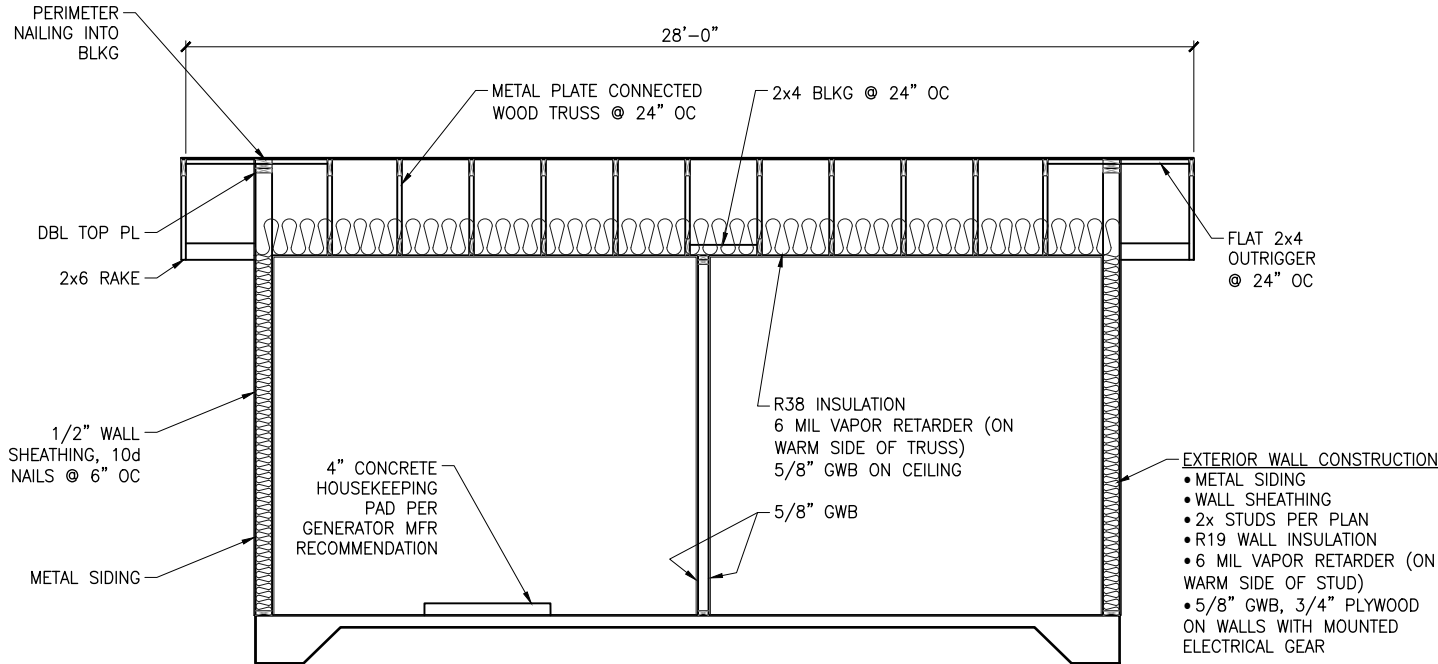
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763

SAND POINT DOCK REPLACEMENT

LADDER DETAILS

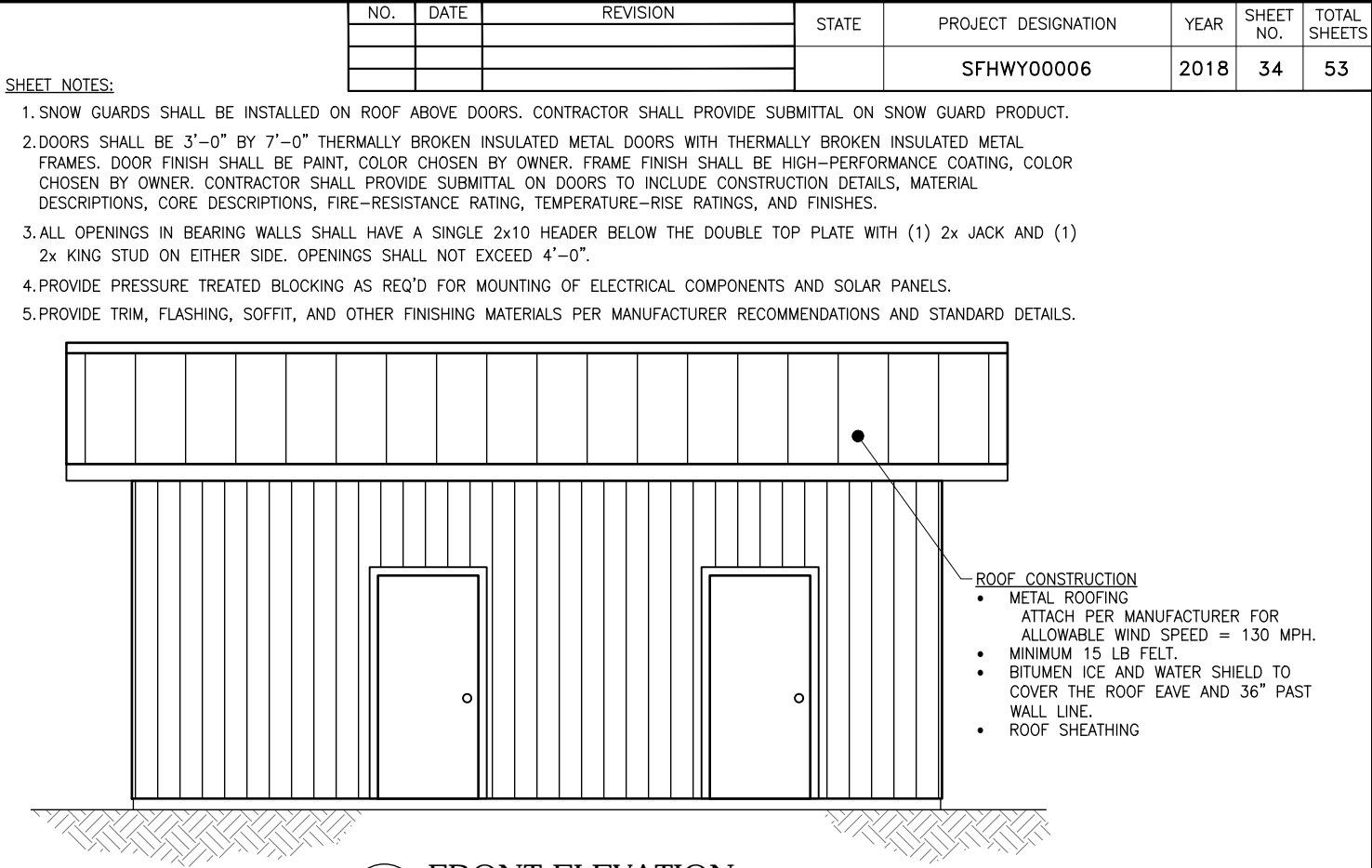


1 PLAN

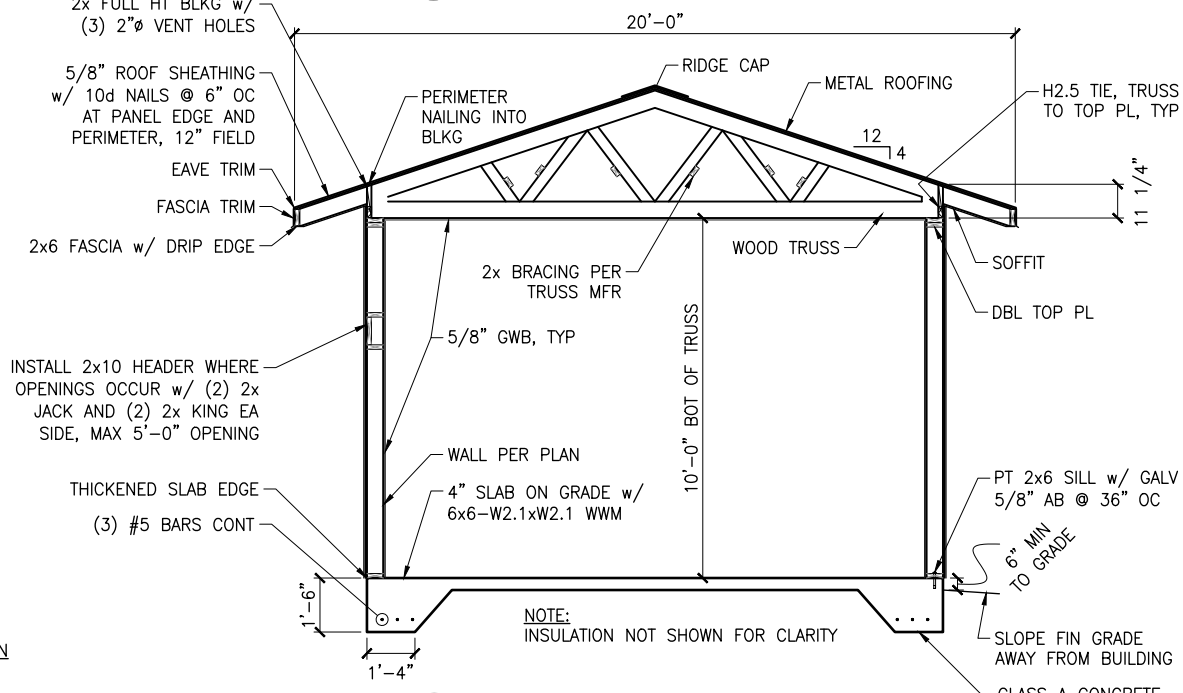


2 SECTION

GENERATOR BUILDING DELETED IN ITS ENTIRETY.
SEE CONTRACTOR PROVIDED AS BUILTS FOR SECURITY BUILDING WAREHOUSE



3 FRONT ELEVATION



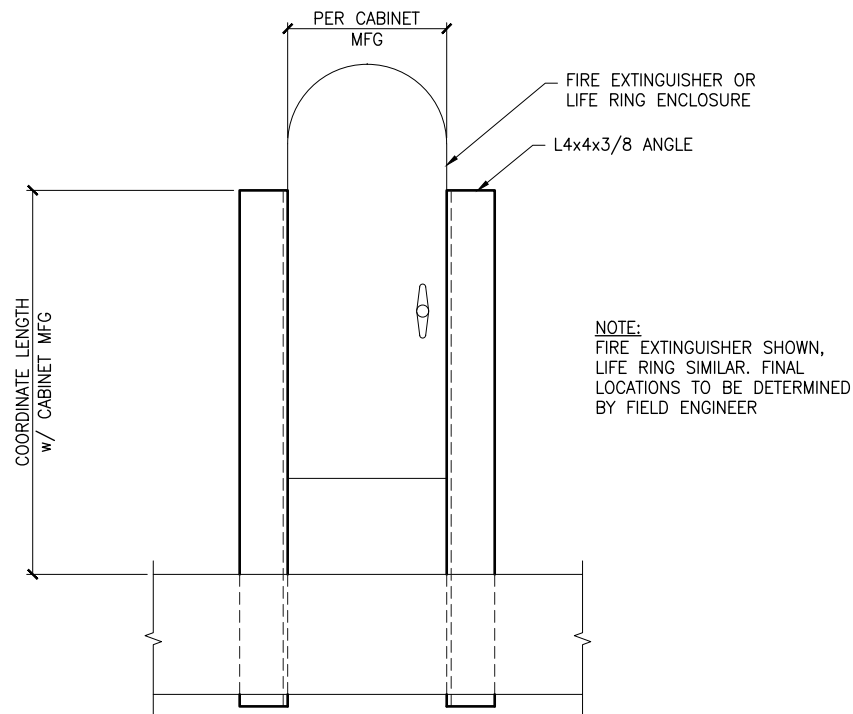
4 SECTION

PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
AK. LIC# AECC250

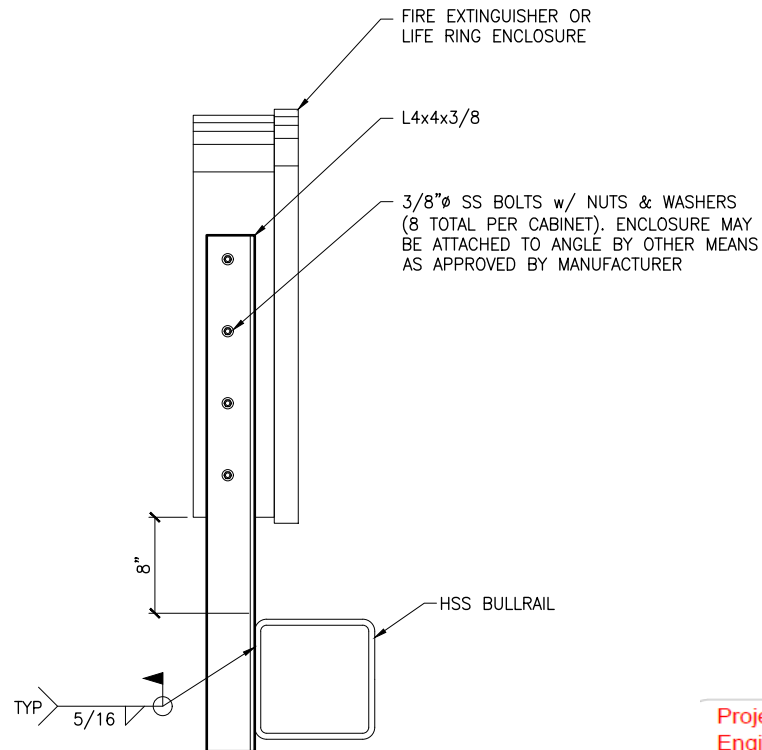


STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763
SAND POINT DOCK REPLACEMENT
GENERATOR BUILDING

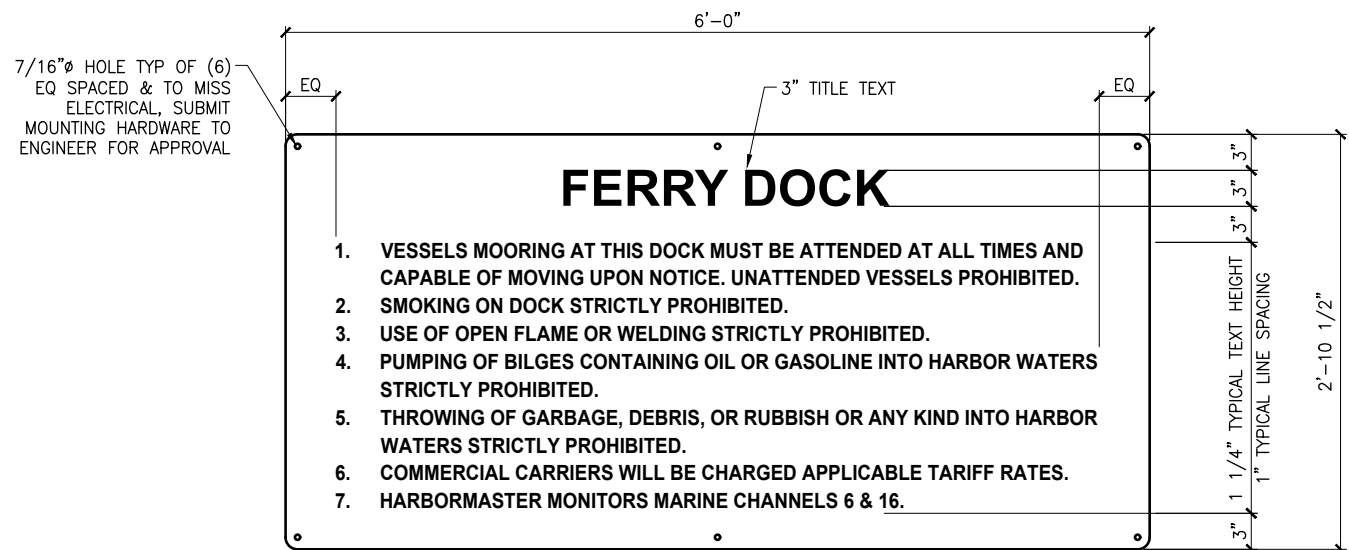
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFWHY00006	2018	35	53



1 SAFETY EQUIP MOUNT - ELEV



2 SAFETY EQUIP MOUNT - PROFILE



3 INFORMATION SIGN
34 SIGN No. 1

GENERAL SIGN NOTES:

1. NEW STANDARD SIGNS SHALL BE PROVIDED PER DOT STANDARD SPECIFICATION 615.
2. ALL SIGNS SHALL BE 0.125" THICK ALUMINUM.
3. NEW SIGN PLATE No. 1 SHALL HAVE BLUE REFLECTIVE SHEETING WITH WHITE LETTERING.
4. NEW SIGN PLATE No. 2 SHALL HAVE YELLOW REFLECTIVE SHEETING WITH BLACK LETTERING.



4 CATWALK WARNING SIGN

- SIGN No. 2

SIGN SUMMARY				
SIGN No.	SIGN	QUANTITY	AREA SQ FT	LOCATION
1	1	1	18	SOUTH SIDE OF GENERATOR BUILDING, PER SHEET 34
2	2	1	4.3	MOUNT TO HANDRAIL AT START OF CATWALK

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021

PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
AK. LIC# AECC250

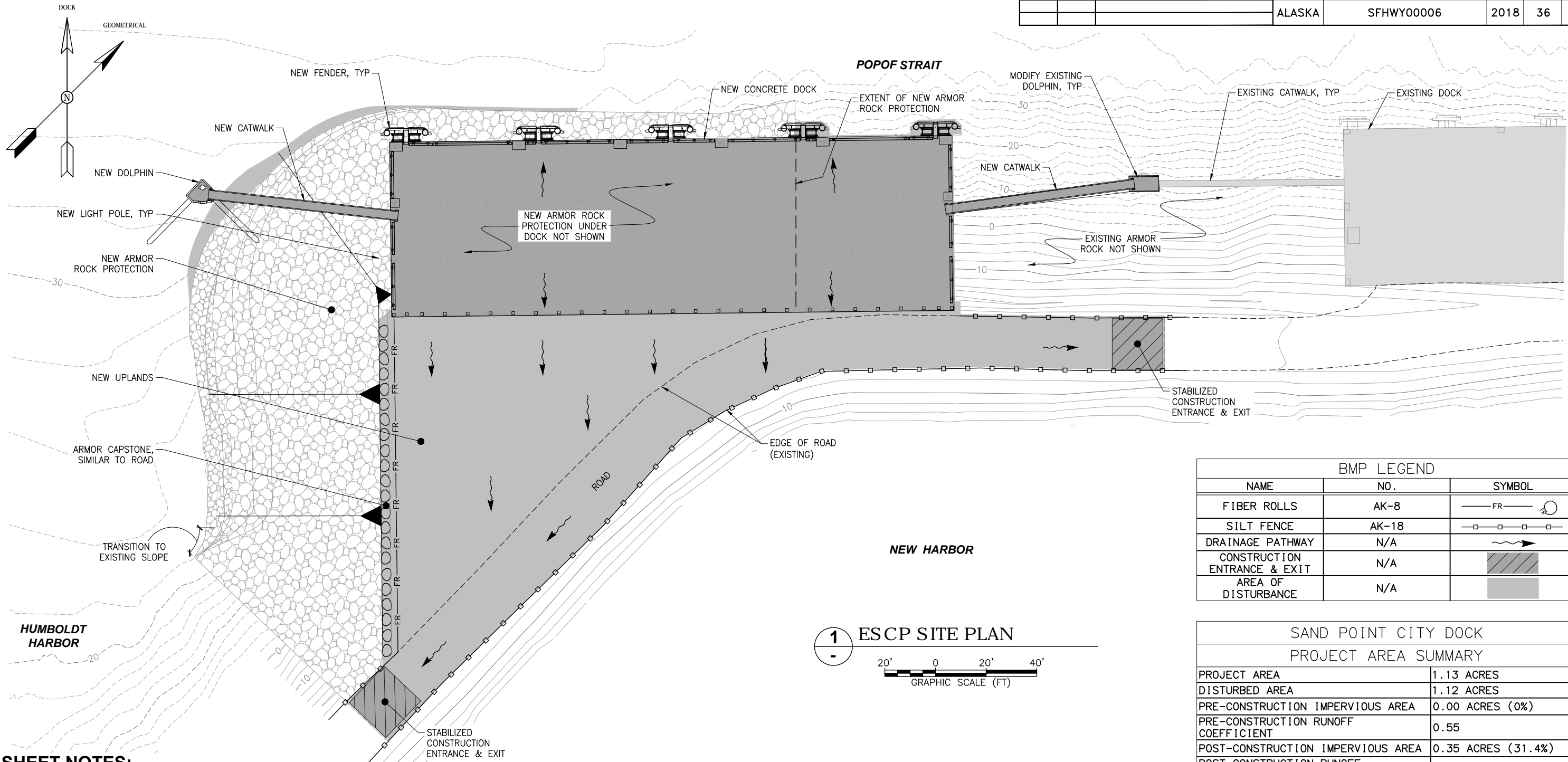


STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763

SAND POINT DOCK REPLACEMENT

SIGNAGE DETAILS

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFHWHY00006	2018	36	53



SHEET NOTES:

- GENERAL**
- THIS ESCP IS A GENERAL PLAN FOR GUIDING THE DEVELOPMENT OF THE CONTRACTOR'S SWPPP. THE CONTRACTOR IS EXPECTED TO PROVIDE ADDITIONAL DETAILS AND BMP'S BASED ON THE CONTRACTOR'S METHODS AND SCHEDULE, AS REQUIRED TO COMPLY WITH THE CONSTRUCTION GENERAL PERMIT AND SECTION 641. CONTRACTOR SHALL MINIMIZE THE AMOUNT OF DISTURBED AREA OPEN TO EROSION AT ANY ONE TIME.
 - WHEN POSSIBLE, AVOID CONDITIONS WHICH PROMOTE CONCENTRATED FLOWS. WHEN CONCENTRATED FLOWS OCCUR INSTALL VELOCITY CONTROL BMP'S
 - SEDIMENT CONTROL MEASURES AND TEMPORARY EROSION CONTROL FEATURES SHALL BE BASED ON BEST MANAGEMENT PRACTICES AS CONTAINED IN THE DEPARTMENT'S MANUAL, "ALASKA STORM WATER POLLUTION PREVENTION PLAN GUIDE."
 - REFER TO ADOT&PF STORM WATER AND WATER QUALITY RESOURCES FOR ADDITIONAL SWPPP GUIDANCE, INCLUDING BMP'S AND CONDITIONS FOR THEIR USE.

- PERIMETER CONTROL**
- TEMPORARY PERIMETER CONTROL BMP'S SHALL BE INSTALLED BEFORE ANY UP-GRADE SOIL DISTURBANCE OCCURS.
 - PROVIDE PERIMETER CONTROLS AS NEEDED TO PREVENT SILT AND SEDIMENT FROM LEAVING THE PROJECT AREA IN ACCORDANCE WITH SECTION 641 AND THE ENVIRONMENTAL COMMITMENTS AND PERMITS CONTAINED IN APPENDIX B OF THE PROJECT SPECIAL PROVISIONS. PERIMETER CONTROLS MAY INCLUDE, BUT ARE NOT LIMITED TO, FLOATING SILT CONTAINMENT BOOMS AND UPLAND SILT FENCES, SITE GRADING AWAY FROM WATER BODIES, EARTH OR ROCK DIKES OR BERMS OR OTHER BARRIER CONTROLS AS MAY BE DETERMINED BY THE CONTRACTOR AND SUBSEQUENTLY CONTAINED IN THE APPROVED SWPPP AND ESCP PLANS.
 - THE TYPE, EXTENT LOCATION OF FLOATING SILT BOOMS AND SILT FENCES SHALL BE DETERMINED BY THE CONTRACTOR. DEPENDING ON THE CONSTRUCTION MEANS AND METHODS, FLOATING SILT BOOMS AND SILT FENCES NEED NOT COMPLETELY ENCIRCLE THE WORK SITE OR BE SITED AS NOTED ON THIS PLAN SHEET DEPENDING ON THE CONTRACTOR'S APPROVED ESCP PLAN.
 - FLOATING SILT BOOMS OR CURTAINS SHALL BE DESIGNED BY THE CONTRACTOR. THE DEVICES SHALL BE OF SUFFICIENT DEPTH, LENGTH AND ORIENTATION TO PREVENT SEDIMENT TRANSFER DURING ALL INTERTIDAL FILL PLACEMENT WORK.

- SLOPE PROTECTION**
- SLOPE PROTECTION BMP'S MAY INCLUDE SLOPE ROUGHENING, TRACK-WALKING, EROSION CONTROL BLANKETS, SEEDING, ROCK LINING, OR OTHER METHODS APPROVED BY THE PROJECT ENGINEER.
- ENVIRONMENTAL INFORMATION**
- RECEIVING WATERS: POPOF STRAIT, HUMBOLDT HARBOR, NEW HARBOR.
 - IMPAIRED WATERS: POPOF STRAIT (SEAFOOD WASTE RESIDUE).
 - THREATENED AND ENDANGERED SPECIES: SEE PROJECT PERMIT DOCUMENTS FOR ADDITIONAL INFORMATION.
 - FISH & WILDLIFE HABITAT PRESENCE: MIGRATORY BIRDS, MARINE MAMMALS. SEE PROJECT EROSION AND SEDIMENT CONTROL PLAN FOR ADDITIONAL INFORMATION.
 - REFER TO PROJECT EROSION AND SEDIMENT CONTROL PLAN FOR ADDITIONAL PERMIT INFORMATION, ENVIRONMENTAL COMMITMENTS, AND/OR OTHER PROJECT SPECIFIC ENVIRONMENTAL RELATED INFORMATION.

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.
PE *Randall Johnston* Date: 12.02.2021

PLANS DEVELOPED BY:
PND ENGINEERS, INC.
1506 W. 36TH AVE
907-561-1011
AK. LIC# AECC250



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763

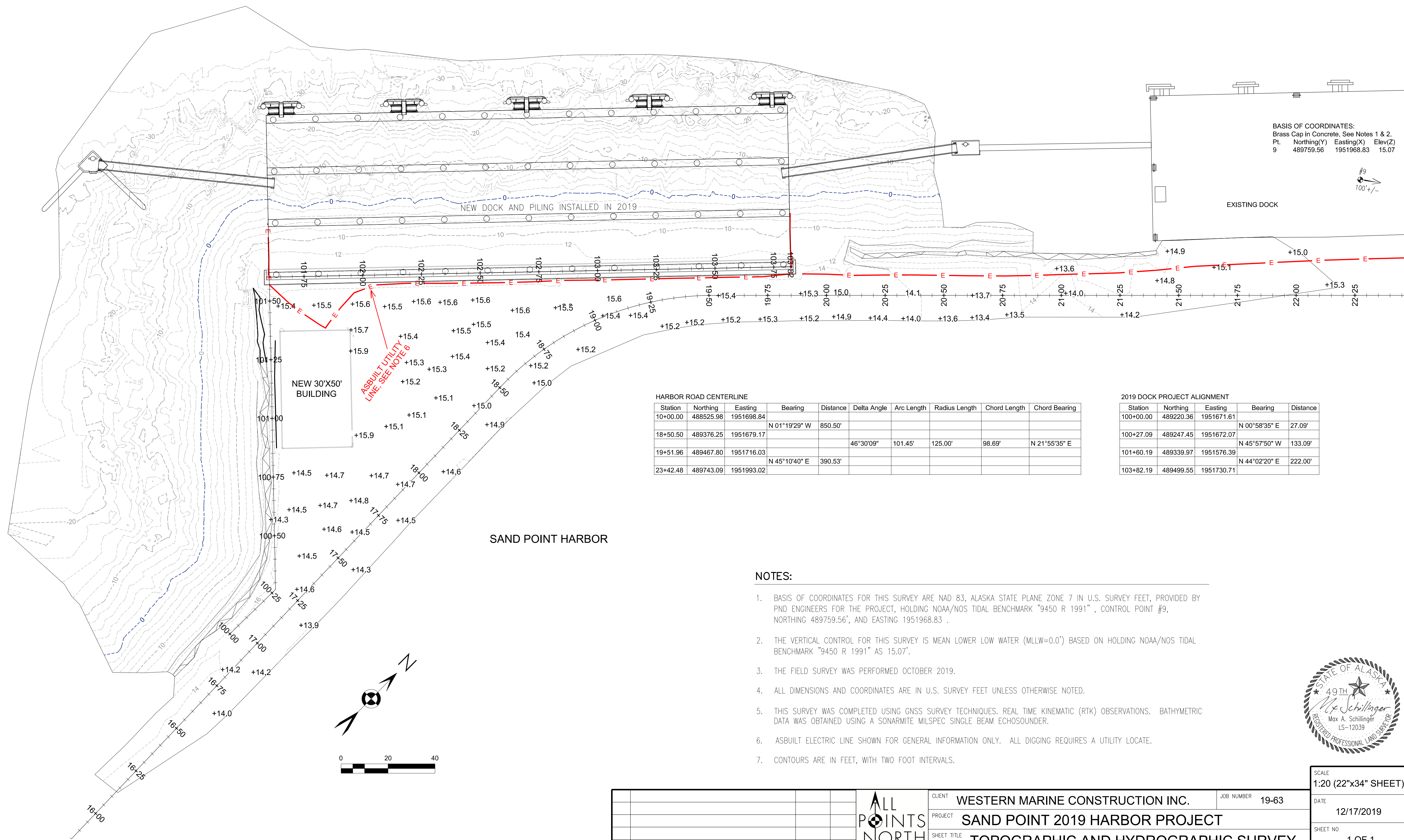
SAND POINT DOCK REPLACEMENT

EROSION AND SEDIMENT CONTROL PLAN

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021



					CLIENT	WESTERN MARINE CONSTRUCTION INC.	JOB NUMBER	19-63	DATE	12/17/2019	
					PROJECT	SAND POINT 2019 HARBOR PROJECT				SHEET NO	1 OF 1
					SHEET TITLE	TOPOGRAPHIC AND HYDROGRAPHIC SURVEY					
SYM.	REVISIONS		DATE		BY						

1. ALL COMPONENTS SHALL BE ANCHORED TO THE BUILDING STRUCTURE. ANCHORAGE SHALL BE DESIGNED FOR ALL DESIGN CASES, INCLUDING SEISMIC, BY THE CONTRACTORS ENGINEER AND SUBMITTED TO THE ENGINEER FOR APPROVAL. DRAWINGS AND CALCULATIONS SHALL BE SEALED BY A REGISTERED ENGINEER IN THE STATE OF ALASKA.

9. ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OF THE LATEST EDITION OF CHP 19 OF THE CODE, ACI 318 AND THE "ACI DETAILING MANUAL: DETAILS AND DETAILING CONCRETE REINFORCEMENT", ACI 315.

8. IF PNEUMATIC NAILERS ARE TO BE USED THE CONTRACTOR MUST SUBMIT A SCHEDULE OF FASTENERS AS DESIRED AS A SUBSTITUTION TO THE ENGINEER FOR APPROVAL.

2. ENGINEERING DESIGN AND SHOP DRAWINGS BEARING THE STAMP OF AN ENGINEER REGISTERED IN THE STATE OF ALASKA AND SHOWING ALL DETAILS OF CONSTRUCTION SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL.

DS CONCRETE
WAS USED,
NOT A-A

K	.....	KIP (1000 LB)
KSI	.....	KIPS PER SQUARE INCH
LL	.....	LIVE LOAD
LOC	.....	LOCATION
LONG	.....	LONGITUDINAL
MANUF	.....	MANUFACTURER
MATL	.....	MATERIAL
MAX	.....	MAXIMUM
MECH	.....	MECHANICAL
MIN	.....	MINIMUM
MPH	.....	MILES PER HOUR
MTL	.....	METAL
(N)	.....	NEW
NIC	.....	NOT IN CONTRACT
NS	.....	NEAR SIDE
NTS	.....	NOT TO SCALE
OC	.....	ON CENTER
OF	.....	OUTSIDE FACE
PC	.....	PRECAST
PL	.....	PLATE
PLB	.....	PARALLAM BEAM
PLF	.....	POUNDS PER LINEAL FOOT
PSF	.....	POUNDS PER SQUARE FOOT
PSI	.....	POUNDS PER SQUARE INCH
REF	.....	REFERENCE
REINF	.....	REINFORCEMENT
REQ'D	.....	REQUIRED
RO	.....	ROUGH OPENING
SCHED	.....	SCHEDULE
SCR	.....	SCREWS
SIM	.....	SIMILAR
SOG	.....	SLAB ON GRADE
SQ	.....	SQUARE
STD	.....	STANDARD
STL	.....	STEEL
T&B	.....	TOP & BOTTOM
THRD	.....	THREADED
TO	.....	TOP OF
TOC	.....	TOP OF CONCRETE
TOS	.....	TOP OF STEEL
TYP	.....	TYPICAL
UNO	.....	UNLESS NOTED OTHERWISE
V/VERT	.....	VERTICAL
W/	.....	WITH
WD	.....	WIDE
WF	.....	WIDE FLANGE
WWF	.....	WELDED WIRE FABRIC

S-001

			DRAWN	JMS
			CHECKED	MCS
			DATE	10/21/2017
			PROJECT No. 19265JN	
			SHEET NUMBER S-001	
No.	Date	Item		
REVISIONS				

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION, AFFECTING ALL LABELED SCALES

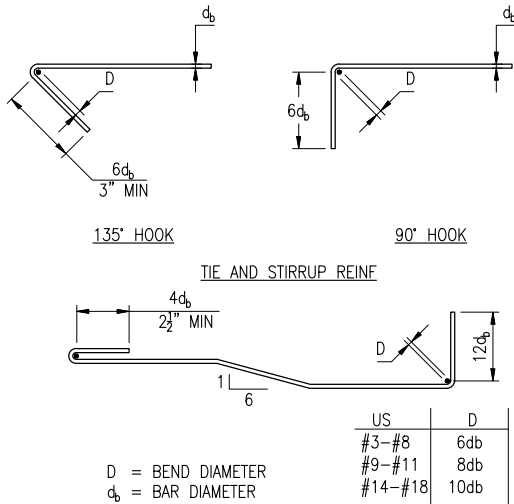
P:\2019\19265JN\REV_S-101.TYPICAL FOUNDATION DETAILS.dwg 04/21/2019 4:42 PM

TYPICAL CONCRETE LAP SPlice SCHEDULE

F'C (PSI)	CLASS "B" TENSION LAP SPlice					
	BAR SIZE (GR 60)	3	4	5	6	7
	BAR DIAMETER (IN)	0.375	0.5	0.625	0.75	0.875
4500	TOP BAR	23	31	38	46	53
	BOTTOM BAR	18	24	29	35	41

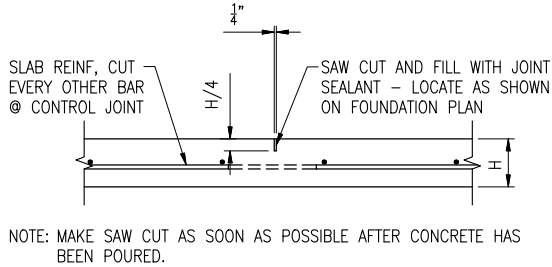
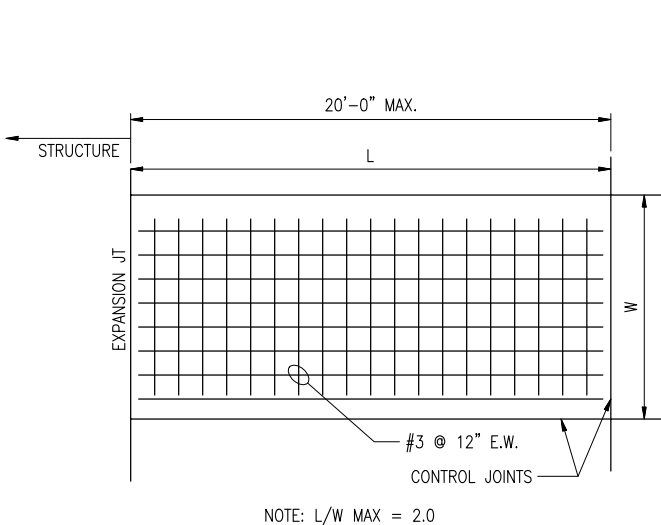
SCHEDULE NOTES:

1. REINFORCEMENT CLEAR SPACING OF THE BARS BEING DEVELOPED OR SPliced IS NOT LESS THAN ONE BAR DIAMETER, CLEAR COVER IS NOT LESS THAN ONE BAR DIAMETER AND STIRRUPS ARE PLACED CONTINUOUSLY THROUGHOUT SPlice LENGTH. THE ABOVE VALUES ARE EXPRESSED FOR NORMAL-WEIGHT CONCRETE ONLY.
2. THE ABOVE VALUES RELATE ONLY TO PLAIN (UNCOATED) DEFORMED REINFORCING.
3. TOP BARS ARE HORIZONTAL REINFORCEMENT WITH MORE THAN 12" OF NEW CONCRETE PLACED MONOLTHICALLY BELOW BAR.
4. BOTTOM BARS ARE HORIZONTAL REINFORCEMENT WITH LESS THAN 12" OF NEW CONCRETE PLACED BELOW BAR.



D = BEND DIAMETER
db = BAR DIAMETER

STANDARD HOOKS



1 LAP SPlice SCHEDULE

S-101 SCALE: 1'-0" = 1'-0"

2 TYPICAL REINF HOOK DETAIL

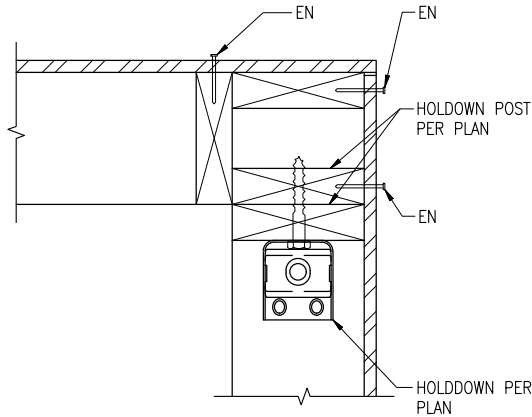
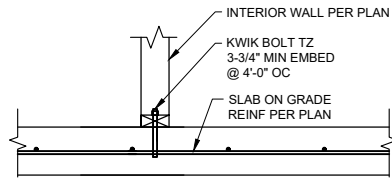
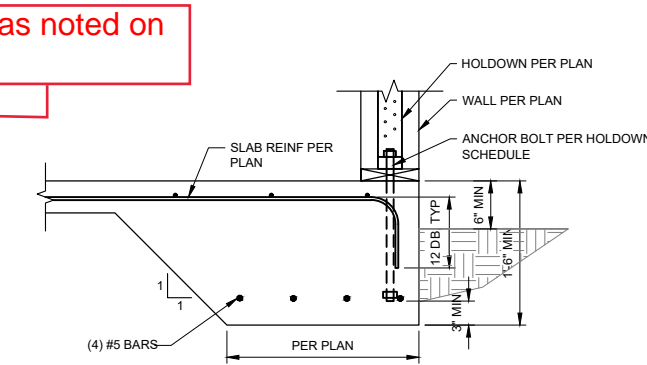
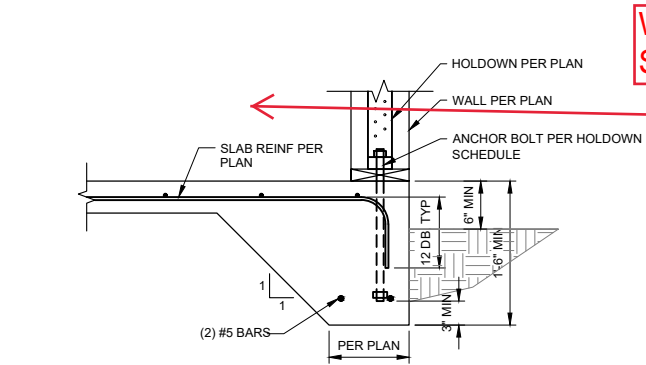
S-101 SCALE: 1" = 1'-0"

3 TYPICAL SLAB ON GRADE

S-101 SCALE: 1/4" = 1'-0"

4 TYPICAL CONTROL JOINT

S-101 SCALE: 1" = 1'-0"



5 FOUNDATION DETAIL

S-101 SCALE: 1" = 1'-0"

6 FOUNDATION DETAIL

S-101 SCALE: 1" = 1'-0"

7 INTERIOR WALL TO SLAB CONNECTION

S-101 SCALE: 1" = 1'-0"

8 HOLDOWN AT CORNER

S-101 SCALE: 3" = 1'-0"

WWF as noted on S-201

Contractor Provided AS Built Drawings Page 2 of 6

CONSULTANT :



PROJECT : SAND POINT GARAGE

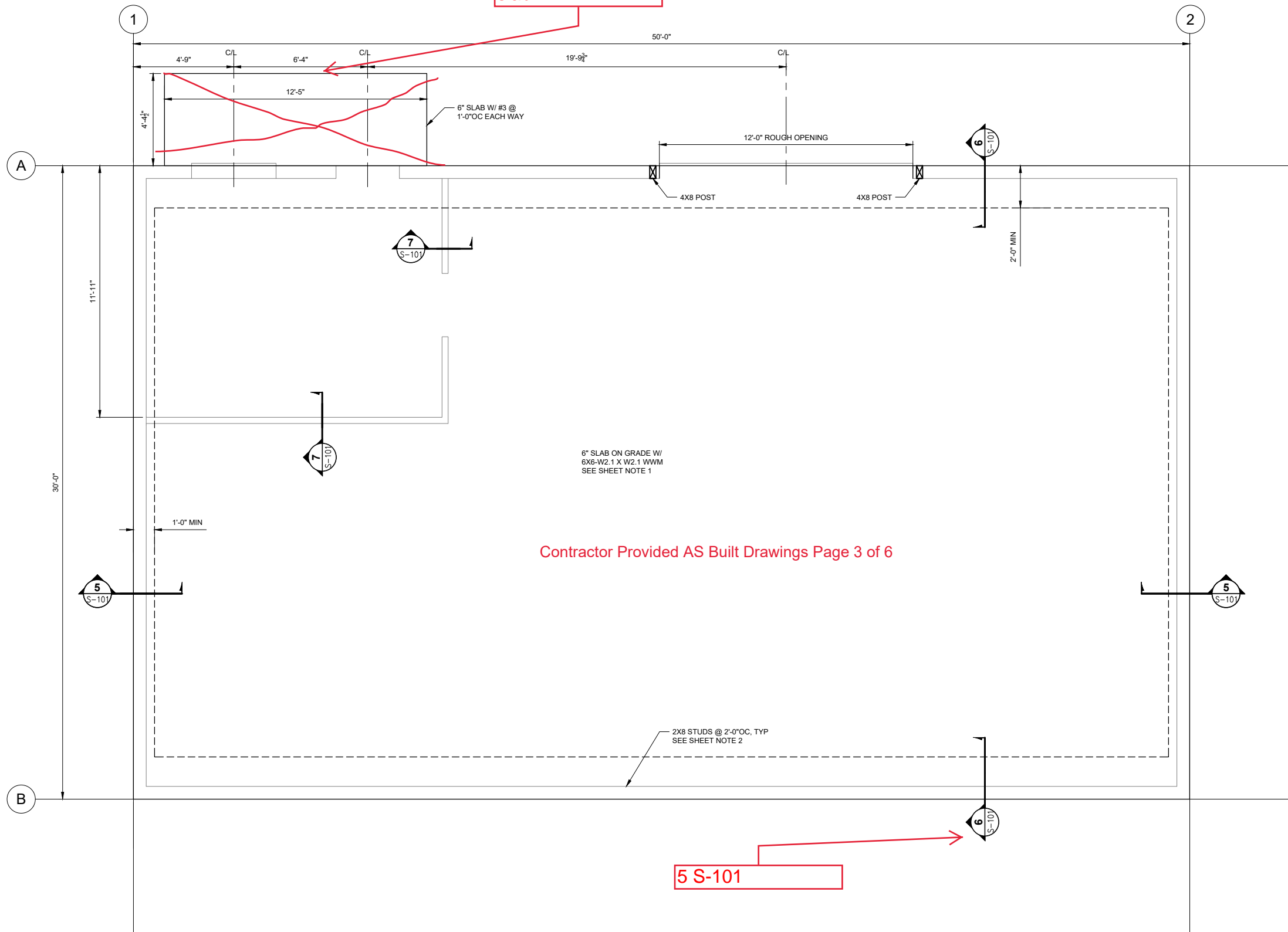
SHEET TITLE : FOUNDATION DETAILS

DESIGN	JMS
DRAWN	JMS
CHECKED	MCS
DATE	10/21/2019
PROJECT No.	19265JN
SHEET NUMBER	S-101

No.	Date	Item
REVISIONS		

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING IT'S PRODUCTION, AFFECTING ALL LABELED SCALES

P:\2019\19265JN\RY_Sand_Plan\S-201 FOUNDATION PLAN.dwg, P:\2019 FOUNDATION PLAN, Oct 21, 2019, 4:42 PM



SHEET NOTES

1. CHAIR THE MESH SO IF STEPPED ON DURING POUR, IT WILL STAY CENTERED IN THE SLAB.
2. ON NORTH & SOUTH WALLS ALIGN STUDS WITH TRUSSES ABOVE.

1

FOUNDATION PLAN

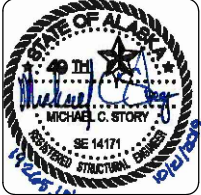
S-201

SCALE: 3/8" = 1'-0"



No.	Date	Item
REVISIONS		

CONSULTANT :



PDC

ENGINEERS

PLAN • DESIGN • CONSTRUCT

6205 Glacier Highway, Juneau, Alaska 99801
907.780.6060 | AECC505

PROJECT :
SAND POINT GARAGE

SHEET TITLE :
FOUNDATION PLAN

DESIGN	JMS
DRAWN	JMS
CHECKED	MCS
DATE	10/21/2019

PROJECT No.
19265JN
SHEET NUMBER

S-201



S-202 SCALE: 3/8" = 1'-0"

1. STUDS TO ALIGN WITH TRUSSES ABOVE.

PDC
ENGINEERS

PLAN • DESIGN • CONSTRUCT

6205 Glacier Highway, Juneau, Alaska 99801
907.780.6060 / AEC-CR05

SHEET TITLE :

ROOF FRAMING PLAN

PROJECT No.	19265JN
SHEET NUMBER	

S-202

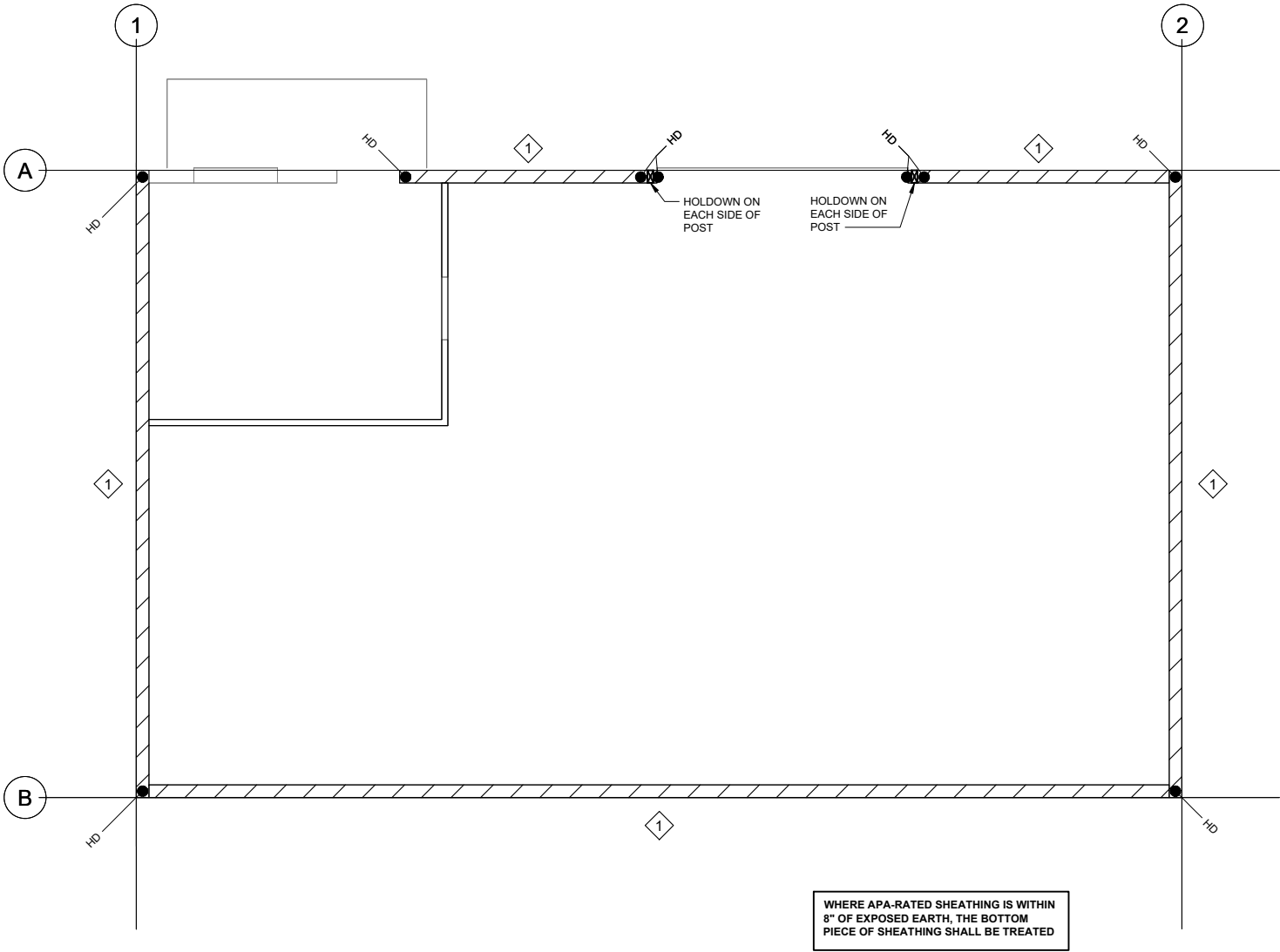
No.	Date	Item
REVISIONS		

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING IT'S PRODUCTION, AFFECTING ALL LABELED SCALES.

P:\2019\19265JN\ARY_Sand_P\19265-203 SHEARWALL PLAN S-203 SHEARWALL PLAN_04.21.2019_4.42 PM

SHEAR WALL SCHEDULE								
WALL TYPE	WALL APA-RATED SHEATHING (1)(2)(4)(12)(13)	NAIL SIZE & SPACING @ EDGES (4)(5)	NAIL SIZE & SPACING @ INT FRAMING MEMBER (6)	STUD & BLOCKING SIZE @ ADJOINING EDGES (3)(14)	PLATE NAILING (NAILS SIZE/SP) (9)	RIM JOIST OR BLOCK (7)(8) CONNECTION TO TOP PLATE	SILL PLATE SIZE (11)	ANCHOR BOLT TO CONCRETE BELOW (10)(15)
W1	15/32" CD-EXT./ 1 SIDE	8d @ 6" OC	8d @ 12" OC	2x	(1) 16D @ 6" OC	CLIP @ 24" OC	2x	5/8" Ø @48" OC x 8" EMBED

- (1) INSTALL PANELS EITHER HORIZONTALLY OR VERTICALLY
- (2) WHERE SHEATHING IS APPLIED ON BOTH SIDES OF WALL, PANEL EDGE JOINTS ON 2X FRAMING SHALL BE STAGGERED SO THAT JOINTS ON THE OPPOSITE SIDES ARE NOT LOCATED ON THE SAME STUD.
- (3) BLOCKING IS REQUIRED AT ALL PANEL EDGES
- (4) PROVIDE SHEAR WALL SHEATHING AND NAILING FOR THE ENTIRE LENGTH OF THE WALLS INDICATED ON THE PLANS. SEE PLANS FOR HOLDOWN REQUIREMENTS.
- (5) SHEATHING EDGE NAILING IS REQUIRED AT ALL HOLDOWN POSTS.
- (6) INTERMEDIATE FRAMING MEMBERS SHALL BE 2X
- (7) USE 8DX1 1/2 NAILS WHEN ATTACHING TO FRAMING. USE 8DX 2 1/2 NAILS WHEN ATTACHING THRU SHEATHING.
- (8) FRAMING CLIPS: SIMPSON STRONG TIE A35 OR LTP5 OR EQUIV.
- (9) PROVIDE DOUBLE JOIST, RIM OR EQUAL WHERE PLATE ATTACHMENT SPECIFIES (2) ROWS OF NAILS
- (10) ANCHOR BOLTS SHALL BE PROVIDED WITH STEEL PLATE WASHERS 1/4"X3"X3".
- (11) PROVIDE HOT-DIPPED GALVANIZED NAILS AND CONNECTOR PLATES FOR ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED FRAMING MEMBERS.
- (12) OSB SHEATHING CAN BE USED IF APPROVED BY ENGINEER OF RECORD
- (13) SHEATHING CAN BE APPLIED OVER GYPSUM SHEATHING WITH REVISED NAILING IF APPROVED BY ENGINEER OF RECORD.
- (14) AT ADJOINING PANEL EDGES, (2) 2X STUDS NAILED TOGETHER MAY BE USED IN PLACE OF A SINGLE 3X STUD. (2) 2X STUDS SHALL BE JOINED TOGETHER BY USING PLATE NAILING REQUIREMENTS.
- (15) EPOXY BOLTS CAN BE USED IF APPROVED BY ENGINEER OF RECORD(16) SILL PLATE IS PERMITTED TO BE A 2X MEMBER IF TWO TIMES THE NUMBER OF ANCHOR BOLTS ARE USED.



1

S-203

SHEARWALL PLAN

SCALE: 1/4" = 1'-0"

HOLDOWN SCHEDULE						
TYPE	SIMPSON HOLDOWN	ANCHOR BOLT DIAMETER	EMBED	FASTENERS	MIN CHORD	NOTES
HD	HTT4	5/8"	14"	(18) 16d X 2-1/2"	3 X 3-1/2	INSTALL NUT ON ANCHOR BOLT

- (1) PROVIDE PANEL EDGE NAILING PER SHEARWALL SCHEDULE AT HOLDOWN STUDS AND AT PANEL EDGES.
- (2) HOLDOWNS LOCATED PER PLAN. ONE HOLDOWN EACH END OF SHEARWALL UNO.
- (3) HOLDOWNS SHALL BE SIMPSON STRONG TIE OR APPROVED EQUAL.
- (4) SEE DETAILS FOR HOLDOWN CONFIGURATION.

Contractor Provided AS Built Drawings Page 5 of 6



No.	Date	Item
REVISIONS		

CONSULTANT :

STATE OF ALASKA
MICHAEL C. STORY
SE 14171
MECHANICAL ENGINEERING

PDC ENGINEERS
PLAN • DESIGN • CONSTRUCT
6205 Glacier Highway, Juneau, Alaska 99801
907.780.6060 | AECC505

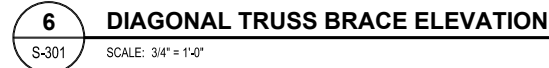
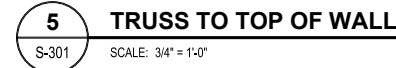
PROJECT :
SAND POINT GARAGE

SHEET TITLE :
SHEARWALL PLAN

DESIGN JMS
DRAWN JMS
CHECKED MCS
DATE 10/21/2019

PROJECT No.
19265JN
SHEET NUMBER

S-203



LEGEND & ABBREVIATIONS

	CONDUIT w/#12 AWG CONDUCTORS, UON. SLASHES DENOTE QUANTITY OF CONDUCTORS IF NOT TWO.
	DUPLEX RECEPTACLE: 18" AFF, UON
	RAISED HEIGHT DUPLEX RECEPTACLE
	SINGLE POLE SWITCH: 48" AFF, UON
	THREE or FOUR-WAY SWITCH: 48" AFF, UON
	LED LINEAR WRAPAROUND
	LED EXTERIOR DOWNLIGHT
	WALL MOUNT LED EXTERIOR LIGHT
	WALL MOUNT PHOTOELECTRIC CELL
	JUNCTION BOX
	PANELBOARD
AFF	ABOVE FINISHED FLOOR
ELC	EXTERIOR LIGHTING CONTROLS
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
LTG	LIGHTING
REC	RECEPTACLE
UON	UNLESS OTHERWISE NOTED
WP	WEATHERPROOF

GENERAL NOTES

1. ALL WORK IS NEW UNLESS OTHERWISE NOTED.

2. PERFORM ALL WORK PER 2017 NATIONAL ELECTRICAL CODE AND OTHER APPLICABLE NATIONAL, STATE, AND LOCAL CODES AND STANDARDS.

3. ALL PART NUMBERS ARE GIVEN AS A GUIDE TO WHAT MATERIAL IS BEING SPECIFIED. THEY ARE BASED UPON INFORMATION AVAILABLE DURING DESIGN AND MAY NOT BE ACCURATE. VERIFY ALL PART NUMBERS DURING BIDDING AND CHANGE AS REQUIRED TO CONFORM TO DRAWINGS AND SPECIFICATIONS. THE DRAWINGS SHALL NOT BE USED AS A BILL OF MATERIALS.

4. PROVIDE DEOX COMPOUND ON ALL WIRING TERMINATIONS. PROVIDE NM SPACERS TO ISOLATE DIFFERENT MATERIAL TYPES.

5. MOUNT ALL OF THE OUTDOOR ELECTRICAL EQUIPMENT IN THE LOCATIONS SHOWN ON THE CIVIL DRAWINGS. LOCATIONS SHOWN ON THE ELECTRICAL DRAWINGS ARE APPROXIMATE.

6. FIELD TREAT ALL HOT DIPPED GALVANIZED MATERIALS THAT ARE CUT, DRILLED, SCRATCHED OR DAMAGED. SEE CIVIL FOR FIELD TREATMENT.

7. ALL WIRING SHALL BE IN CONDUIT. USE SCHEDULE 40 PVC INSIDE BUILDING. USE SCHEDULE 80 PVC OUTSIDE BUILDING, UNDERGROUND, AND ON DOCK. ALL CONDUCTORS SHALL BE COPPER. ALL INSULATION SHALL BE 600V RATED. TYPE XHHW FOR CONDUCTORS NOT IN A CABLE. ALL CABLES SHALL BE THE TYPE SPECIFIED, NO SUBSTITUTIONS.
8. TREAT ALL EXPOSED THREADS WITH BRAKE CLEANER, THEN COAT WITH MARINE TRAILER WHEEL BEARING GREASE BEFORE APPLYING A STAINLESS STEEL WASHER AND NUT.

9. OUTDOORS, USE 316 STAINLESS STEEL BOLTS, WASHERS, ETC. TO MOUNT ELECTRICAL EQUIPMENT AND STRUT CHANNEL. ALL FASTENERS AND OTHER EXPOSED HARDWARE SHALL BE 316 STAINLESS STEEL.

10. SEAL ALL PENETRATIONS IN ELECTRICAL EQUIPMENT WITH UL LISTED HARDWARE FOR SUCH USE. USE RUBBER OR SILICONE WASHERS IN ADDITION TO STAINLESS STEEL WASHERS.

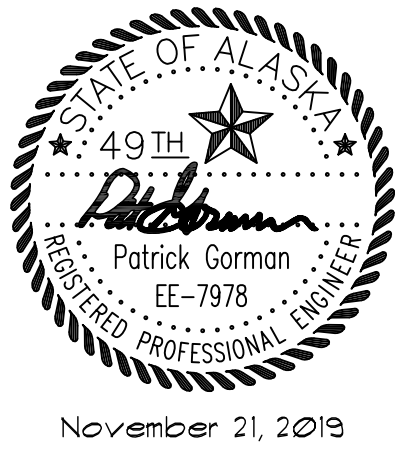
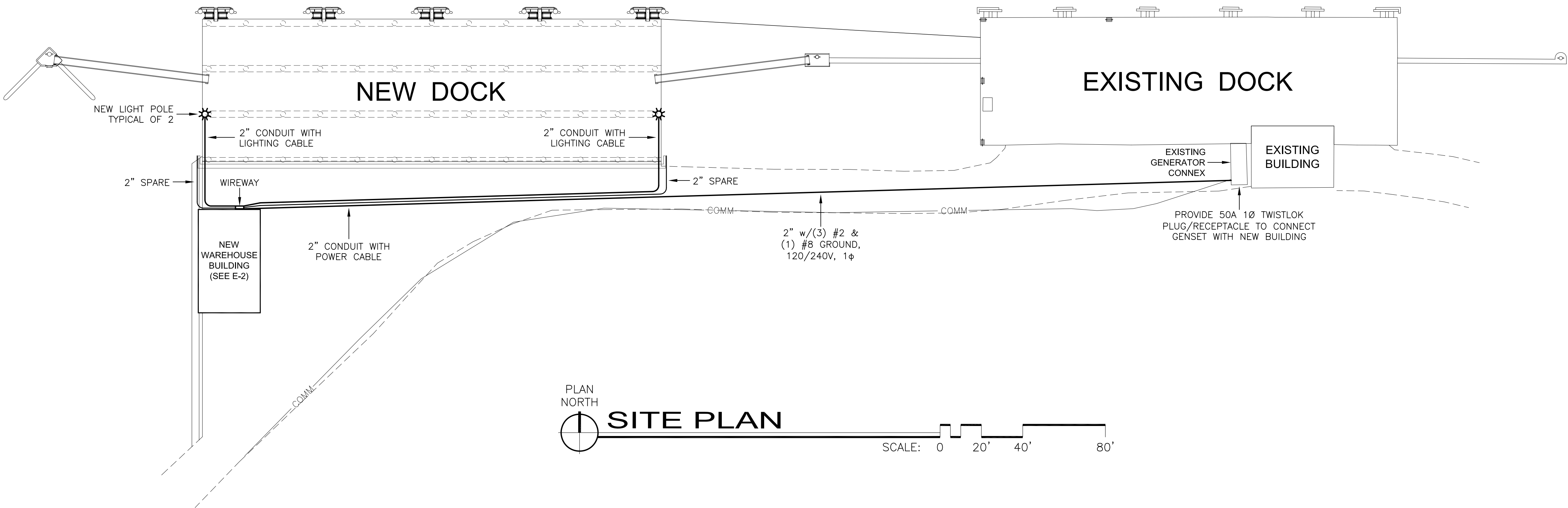
11. USE 316 STAINLESS STEEL STRUT CHANNEL (UNISTRUT) TO SUPPORT CABLES, PANELS, CONTACTORS, AND ALL OTHER ELECTRICAL EQUIPMENT. TRIM STRUT CHANNEL 1/4" SHORT OF EDGE OF EQUIPMENT AND POSTS. SAND END OF STRUT CHANNEL SMOOTH. USE CUSHION STRAPS WHEN SUPPORTING CABLE TO STRUT CHANNEL.

12. PROVIDE OXIDE INHIBITING COMPOUND ON ALL ELECTRICAL CONNECTIONS. BURNDY PENTROX TYPE A OR E AS REQUIRED.

13. ALL LUGS AND ELECTRICAL TERMINALS SHALL BE COPPER OR TIN PLATED HIGH CONDUCTIVE ALUMINUM.

14. ALL STAINLESS STEEL SHALL BE 316 STAINLESS STEEL FOR ENTIRE PROJECT

15. ALL STEEL AND IRON PRODUCTS SHALL MEET THE BUY AMERICA PRODUCTS PER 106-1.01.



GORMAN
ENGINEERS

10761 HORIZON DRIVE
JUNEAU, ALASKA 99801-7626
PHONE: 463.6121 FAX: 463.6121
e-mail: pgorman@gcinc.net

SAND POINT DOCK WAREHOUSE
FOR
ANCHOR ELECTRIC
WESTERN MARINE CONSTRUCTION INC

SHEET TITLE:
LEGEND, GENERAL
NOTES, SITE PLAN

DATE: NOVEMBER 21, 2019
SCALE: AS SHOWN
DRAWN: PG
CHECKED: PG

SHEET NO.
E-1



GORMAN
ENGINEERS
10761 HORIZON DRIVE
JUNEAU, ALASKA 99801-7626
PHONE: 463-6721 FAX: 463-6721
e-mail: pgorman@gcinet.net

SAND POINT DOCK WAREHOUSE
FOR
ANCHOR ELECTRIC
WESTERN MARINE CONSTRUCTION INC

SHEET TITLE:
NOTES, PANEL
SCHEDULE, OFFICE
& BUILDING
PLANS

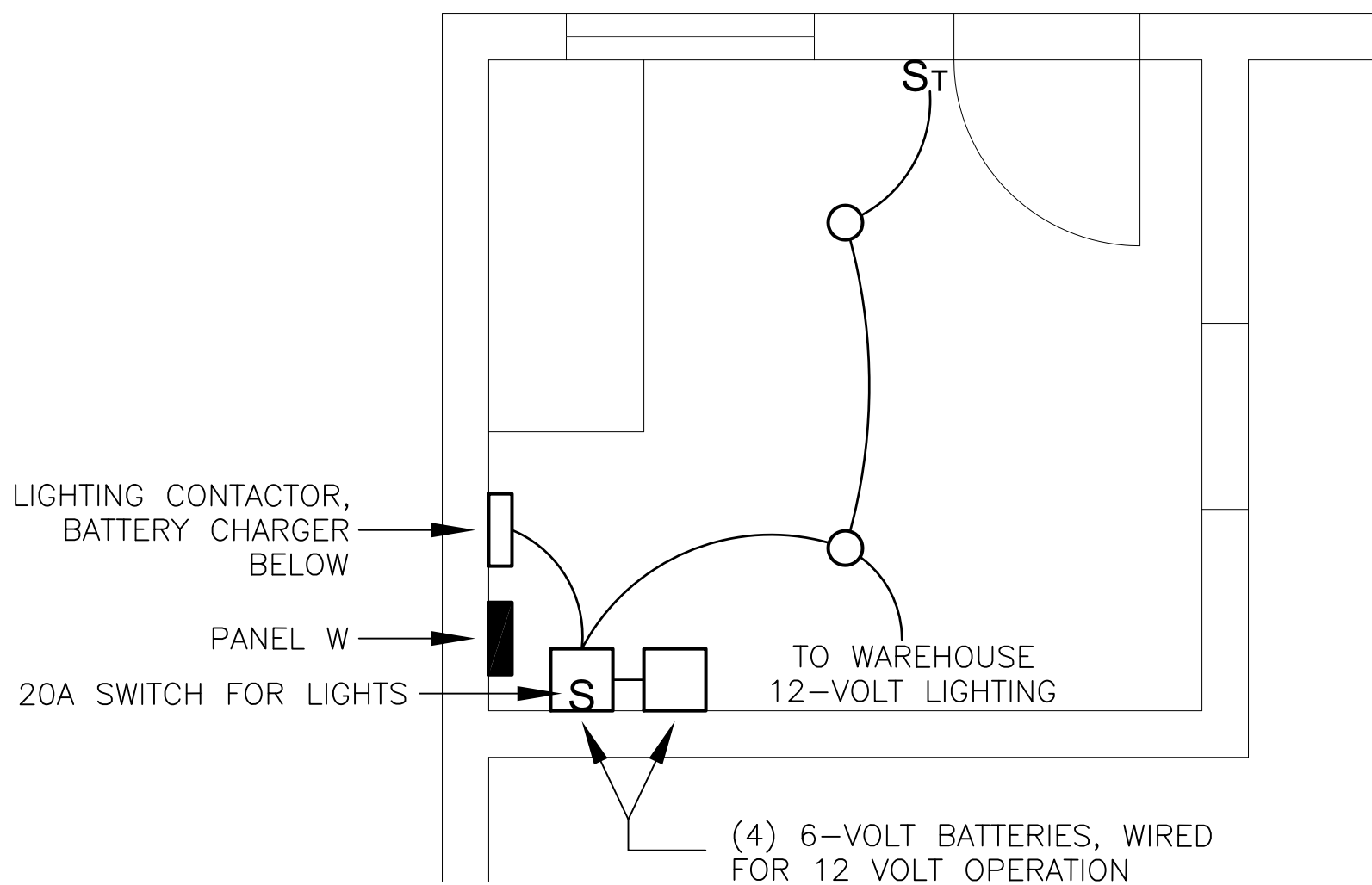
DATE: NOVEMBER 21, 2019
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DRAWN: PG
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SHEET NO.

E-2

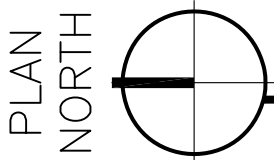
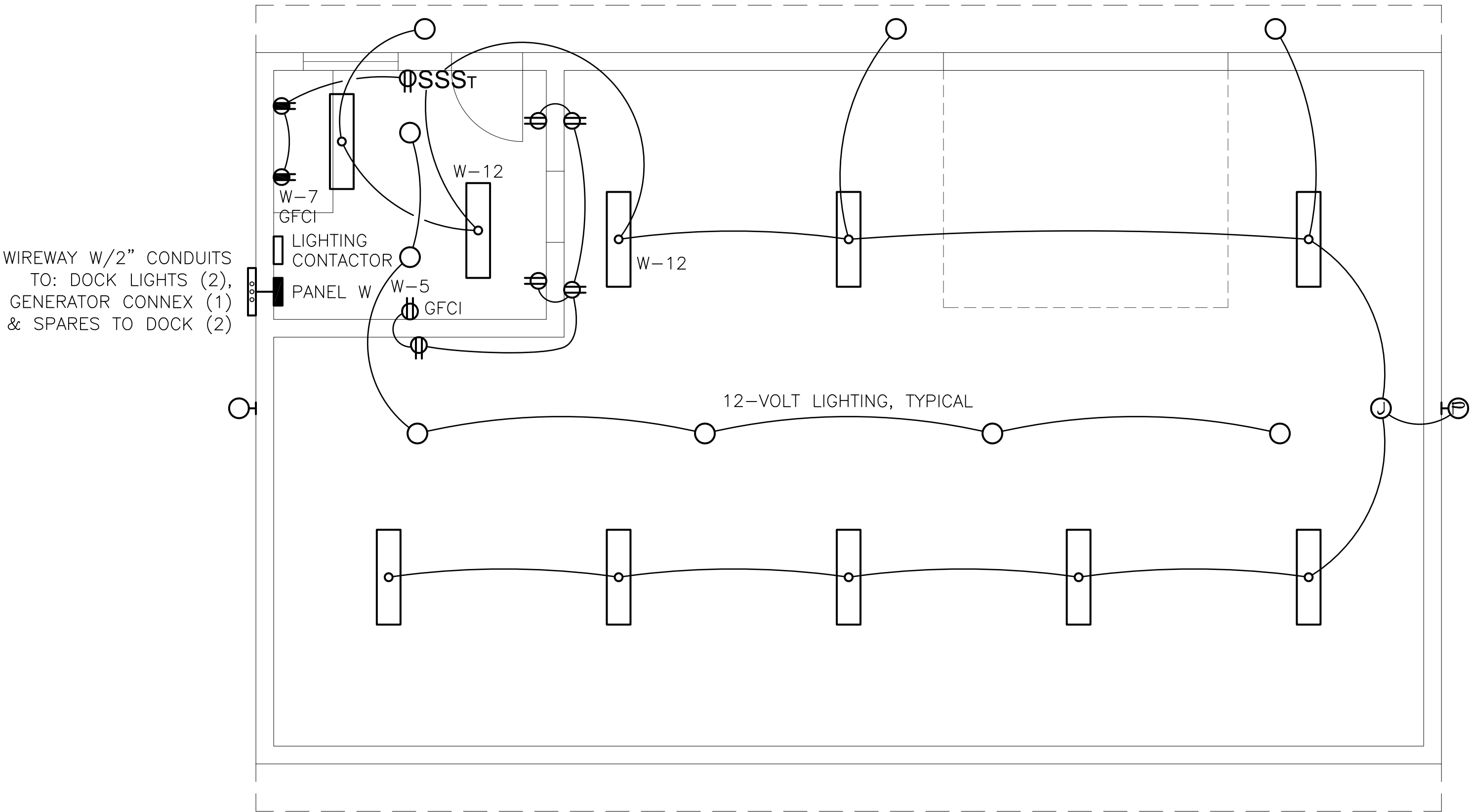
NOTES and SPECIFICATIONS

1. PROVIDE ALL WORK AS SHOWN ON THE DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS AND NOTES FOR A COMPLETE AND FUNCTIONAL INSTALLATION. UNLESS OTHERWISE NOTED, ALL MATERIAL SHALL BE OF NEW MANUFACTURE AND OF THE MANUFACTURER'S STANDARD CONSTRUCTION. ALL MATERIAL SHALL BE APPROVED BY UNDERWRITERS LABORATORIES (UL) AND SO NOTED.
2. ALL WORK SHALL COMPLY WITH LATEST APPROVED EDITIONS OF:
THE NATIONAL ELECTRICAL CODE (NEC)
THE NATIONAL FIRE PROTECTION ASSOCIATION CODES (NFPA)
THE INTERNATIONAL BUILDING CODE (IBC)
THE UNIFORM FEDERAL ACCESSIBILITY STANDARDS (UFAS)
ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS
3. PROVIDE TWO SETS OF AS-BUILT DRAWINGS AT PROJECT COMPLETION. LABEL THE PANELBOARD AND ALL CIRCUIT BREAKERS, JUNCTION BOXES, CONTROLS, ETC. PROVIDE AN ACCURATE, TYPED CIRCUIT DIRECTORY FOR THE PANELBOARD.
4. RACEWAY SYSTEMS SHALL BE SCHEDULE 40 PVC FOR FEEDER AND BRANCH CIRCUITS AND SCHEDULE 80 PVC FOR ALL UNDERGROUND RUNS.
5. ALL CONDUCTORS SHALL BE COPPER. CONDUCTORS IN RACEWAYS SHALL HAVE TYPE THHN/THWN INSULATION FOR INSIDE WORK AND TYPE XHHW-2 FOR EXTERIOR WORK.
6. BOXES SHALL BE STEEL OR PLASTIC. ALL WIRING DEVICES SHALL BE SPECIFICATION GRADE, SCREW CONNECTED, WITH MATCHING NYLON PLATES. PROVIDE A MANUAL STARTER/DISCONNECT FOR MOTOR LOADS AS NECESSARY.
7. CONNECTED LOAD IS 5.5 KVA (22.9 AMPERES).
DEMAND LOAD IS 5.4 KVA (22.5 AMPERES).



OFFICE DETAIL



















Panel W				SIZE		VOLTS / PHASE			MAIN		MOUNT / LOCATION		AIC RATING	
				100 amps		120/240, 1Ø, 3W			BREAKER		SURFACE / OFFICE		10,000 A	
CKT #	WIRE Qty/ Size	CIRCUIT DESCRIPTION	BRKR Amp/ Pole	K V A					BRKR Amp/ Pole	CIRCUIT DESCRIPTION	WIRE Qty/ Size	CKT #		
				CKT	A		B	CKT						
1	3/#2	Main Disconnect Breaker	100/2		0.0						Space		2	
3	--	---	--				0.0				↓		4	
5	2/#12	REC - Office, Warehouse	20/1	1.2	2.0			0.8	20/2		LTG - Dock	2/#8	6	
7	2/#12	REC - Office	20/1	0.6			1.4	0.8	--		---	--	8	
9		Spare	20/1		0.6			0.6	20/1		LTG - Building Exterior	2/#12	10	
11		Spare	20/1				1.0	1.0	20/1		LTG - Office, Warehouse	2/#12	12	
13		Spare	20/1		0.5			0.5	20/1		Battery Charger	2/#12	14	
15		Space					0.0		20/1		Spare		16	
17		↓			0.0				20/1		Spare		18	
19		↓					0.0		20/1		Spare		20	
21		↓			0.0						Space		22	
23		↓					0.0				↓		24	
25		↓			0.0						↓		26	
27		↓					0.0				↓		28	
29		↓			0.0						↓		30	
TOTAL CONNECTED LOAD (kVA):				5.5	3.1	2.4	ACTUAL DEMAND LOAD (kVA): 5.4							



WAREHOUSE ELECTRICAL PLAN

SCALE: 0 4' 8' 16'

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFHWHY00006	2018	E01	53

LEGEND									
	GROUND		WALL MOUNT LUMINAIRE	DIST.	DISTRIBUTION	LTG	LIGHTING		
	GENERATOR		POLE MOUNT LUMINAIRE	DPST	DOUBLE POLE, SINGLE THROW	MAINT	MAINTENANCE		
S	SINGLE POLE SWITCH		FLUORESCENT LUMINAIRE	ELEC	ELECTRIC OR ELECTRICAL	MDP	MODIFIED PROCTOR DENSITY		
	ELECTRIC MOTOR		UNIT HEATER	EBM	EXTENDED BATTERY MODULE	MIN	MINIMUM		
	JUNCTION BOX		HAND-OFF-AUTO SWITCH	EXTG	EXISTING	NEC	NATIONAL ELEC CODE		
	HOME RUN (PANEL-CKT)			GALV.	GALVANIZED	NM	NON-METALLIC		
	CONDUIT WITH CONDUCTORS. SEE PLANS FOR SIZE AND QUANTITY.			GFI	GROUND FAULT INTERRUPTER	N.O.	NORMALLY OPEN		
	FLEXIBLE CONDUIT	AFF	ABOVE FINISHED FLOOR	GRS	GALVANIZED RIGID STEEL	NO.	NUMBER		
	DISCONNECT	AFG	ABOVE FINISHED GRADE	GND	GROUND	PF	POWER FACTOR		
	CIRCUIT BREAKER (AMPS/POLES)	AUX	AUXILIARY	HOA	HAND-OFF-AUTO	PWR	POWER		
	CONTACTOR	AWG	AMERICAN WIRE GUAGE	HP	HORSE POWER	REC	RECEPTACLE		
	PHOTO ELECTRIC	BLDG	BUILDING	J-BOX	JUNCTION BOX	SS	316 STAINLESS STEEL		
	RELAY	C/B	CIRCUIT BREAKER	KA	KILOAMPERES	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR		
	LIGHTING CONTACTOR	CKT	CIRCUIT	KAIC	KILO-AMPERE INTERRUPTING CAPACITY	TYP	TYPICAL		
		C	CONDUIT	KVA	KILOVOLTAMPERES	UGE	UNDERGROUND ELECTRICAL UTILITY		
		CTRL	CONTROL	KW	KILOWATT	WP	WEATHER PROOF		
		DEOX	DE-OXIDATION COMPOUND	LFNC	LIQUID TIGHT NON-METALLIC CONDUIT				

Sheet List Table	
Sheet Number	Sheet Title
E01	TITLE, LEGEND AND GENERAL NOTES
E02	SITE PLAN
E03	SINGLE LINE DIAGRAM
E04	GENERATOR BUILDING FLOOR PLANS
E05	GENERATOR BUILDING ELEVATIONS
E06	EQUIPMENT LIST AND PANEL SCHEDULE
E07	GENERATOR SCHEMATICS
E08	DETAILS
E09	UPLAND LIGHT POLE DETAIL
E10	DOCK LIGHT POLE DETAIL
E11	ABUTMENT DETAILS
E12	HANDHOLE AND TRENCH DETAIL
E13	PHOTOVOLTAIC SYSTEM WIRING SCHEMATIC

GENERAL NOTES:

1. ALL WORK IS NEW UNLESS OTHERWISE NOTED.

2. PERFORM ALL WORK PER 2017 NATIONAL ELECTRICAL CODE AND OTHER APPLICABLE NATIONAL, STATE, AND LOCAL CODES AND STANDARDS.

3. ALL PART NUMBERS ARE GIVEN AS A GUIDE TO WHAT MATERIAL IS BEING SPECIFIED. THEY ARE BASED UPON INFORMATION AVAILABLE DURING DESIGN AND MAY NOT BE ACCURATE. VERIFY ALL PART NUMBERS DURING BIDDING AND CHANGE AS REQUIRED TO CONFORM TO DRAWINGS AND SPECIFICATIONS. THE DRAWINGS SHALL NOT BE USED AS A BILL OF MATERIALS.

4. PROVIDE DEOX COMPOUND ON ALL WIRING TERMINATIONS. PROVIDE NM SPACERS TO ISOLATE DIFFERENT MATERIAL TYPES.

5. MOUNT ALL OF THE OUTDOOR ELECTRICAL EQUIPMENT IN THE LOCATIONS SHOWN ON THE CIVIL DRAWINGS. LOCATIONS SHOWN ON THE ELECTRICAL DRAWINGS ARE APPROXIMATE.

6. FIELD TREAT ALL HOT DIPPED GALVANIZED MATERIALS THAT ARE CUT, DRILLED, SCRATCHED OR DAMAGED. SEE CIVIL FOR FIELD TREATMENT.
7. ALL WIRING SHALL BE IN CONDUIT. USE SCHEDULE 40 PVC INSIDE BUILDING. USE SCHEDULE 80 PVC OUTSIDE BUILDING, UNDERGROUND, AND ON DOCK. ALL CONDUCTORS SHALL BE COPPER, ALL INSULATION SHALL BE 600V RATED. TYPE XHHW FOR CONDUCTORS NOT IN A CABLE. ALL CABLES SHALL BE THE TYPE SPECIFIED, NO SUBSTITUTIONS.

8. TREAT ALL EXPOSED THREADS WITH BRAKE CLEANER, THEN COAT WITH MARINE TRAILER WHEEL BEARING GREASE BEFORE APPLYING A STAINLESS STEEL WASHER AND NUT.

9. OUTDOORS, USE 316 STAINLESS STEEL BOLTS, WASHERS, ETC. TO MOUNT ELECTRICAL EQUIPMENT AND STRUT CHANNEL. ALL FASTENERS AND OTHER EXPOSED HARDWARE SHALL BE 316 STAINLESS STEEL.

10. SEAL ALL PENETRATIONS IN ELECTRICAL EQUIPMENT WITH UL LISTED HARDWARE FOR SUCH USE. USE RUBBER OR SILICONE WASHERS IN ADDITION TO STAINLESS STEEL WASHERS.

11. USE 316 STAINLESS STEEL STRUT CHANNEL (UNISTRUT) TO SUPPORT CABLES, PANELS, CONTACTORS, AND ALL OTHER ELECTRICAL EQUIPMENT. TRIM STRUT CHANNEL 1/4" SHORT OF EDGE OF EQUIPMENT AND POSTS. SAND END OF STRUT CHANNEL SMOOTH. USE CUSHION STRAPS WHEN SUPPORTING CABLE TO STRUT CHANNEL.
12. PROVIDE OXIDE INHIBITING COMPOUND ON ALL ELECTRICAL CONNECTIONS. BURNDY PENTROX TYPE A OR E AS REQUIRED.

13. ALL LUGS AND ELECTRICAL TERMINALS SHALL BE COPPER OR TIN PLATED HIGH CONDUCTIVE ALUMINUM.

14. ALL STAINLESS STEEL SHALL BE 316 STAINLESS STEEL FOR ENTIRE PROJECT.

15. ALL STEEL AND IRON PROJECTS SHALL MEET THE BUY AMERICA PRODUCTS PER 106-1.01.

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021

PLANS DEVELOPED BY:
MORRIS ENGINEERING
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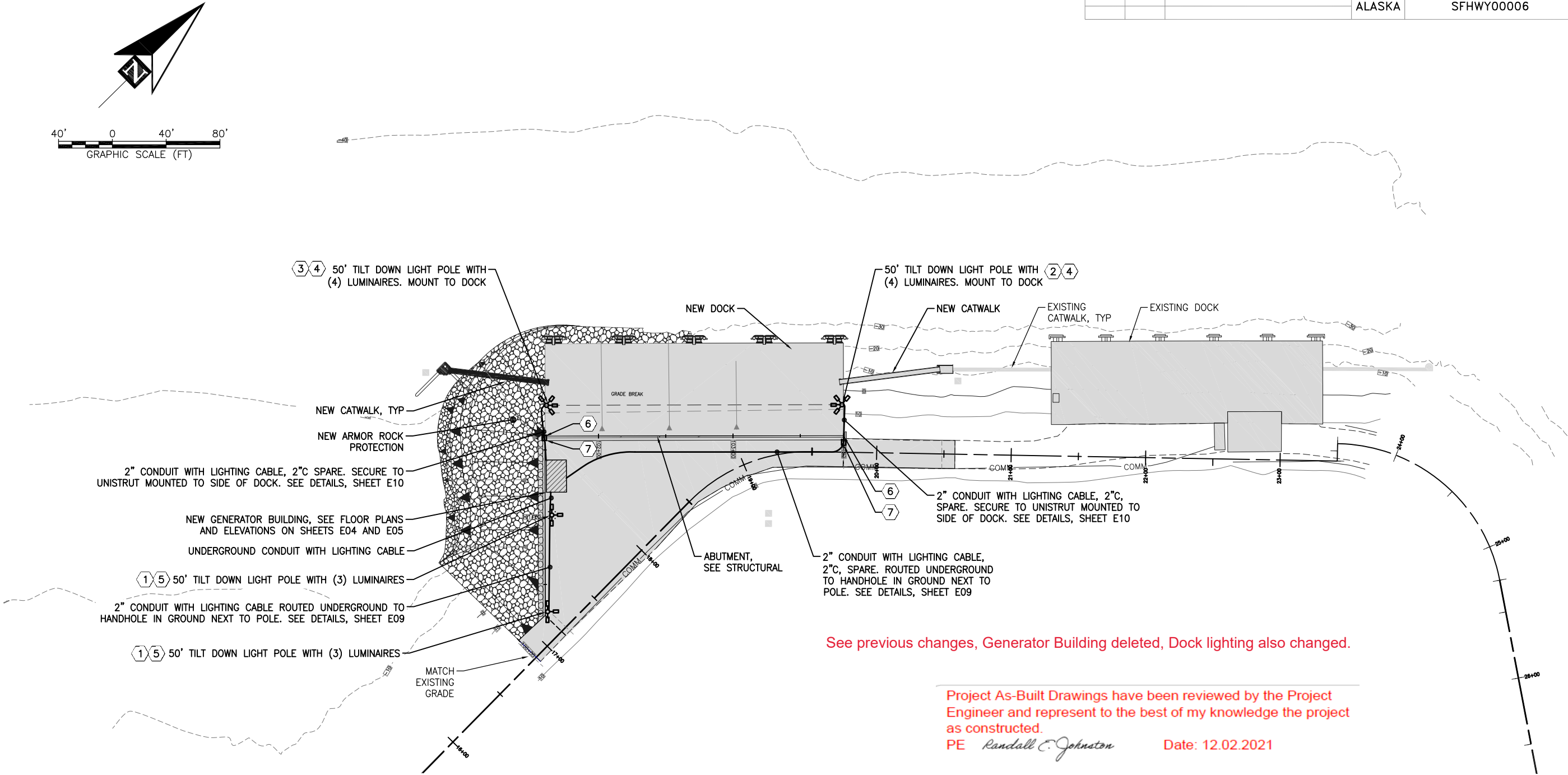
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6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763

SAND POINT DOCK REPLACEMENT

TITLE, LEGEND AND GENERAL
NOTES

FILE y:\118 PN&D\46 sand point\working drawings\E02 SITE PLAN.dwg DATE 11/20/2018 13:52 LAYOUT E02 DESIGNED MCM CHECKED MCM DRAFTED JRW

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFHWHY00006	2018	E02	53



NOTES:

- 50' TILT DOWN POLE WITH (3) LUMINAIRES. POLE MOUNTED LUMINAIRE SHALL CONSIST OF 150 LED LAMPS, 385W, 800MA 120-277V DRIVER, TYPE 4 DISTRIBUTION AT 45°, 90° AND 225°, TYPE 3 DISTRIBUTION AT 135°. 4000K COLOR TEMPERATURE, 34000 INITIAL LUMENS, BLACK FINISH, AND UPSWEPT ARM SUPPORT. PROVIDE PHOTOCCELL RECEPTACLE ON POLE NEXT TO NEW GENERATOR BUILDING. KIM LIGHTING 3STARX2544K80UVBLUSA25-7, LITHONIA, OR EQUAL. IP66 RATED. PROVIDE FLAT BLACK 50' TILT DOWN POLE LUMINAIRES AT 0°, 90°, AND 180°. HANDHOLE AT 90°, WINCH AT 0°, AND POLE TILTS DOWN TOWARD 180°. SEE DETAIL SHEET E09. VERIFY AND MODIFY THE MANUFACTURER PART NUMBER TO PROVIDE LUMINAIRES WITH ALL THE FEATURES DESCRIBED.
- 50' TILT DOWN POLE WITH (4) LUMINAIRES. POLE MOUNTED LUMINAIRE SHALL CONSIST OF 150 LED LAMPS, 385W, 800MA 120-277V DRIVER, TYPE 4 DISTRIBUTION AT 45°, 90° AND 225°, TYPE 3 DISTRIBUTION AT 135°. 4000K COLOR TEMPERATURE, 34000 INITIAL LUMENS, BLACK FINISH, AND UPSWEPT ARM SUPPORT. PROVIDE PHOTOCCELL. KIM LIGHTING 3STARX2544K80UVBLUSA25-7, LITHONIA, OR EQUAL. IP66 RATED. PROVIDE FLAT BLACK 50' TILT DOWN POLE LUMINAIRES AT 45°, 90°, 135° AND 225°. HANDHOLE AT 90°, WINCH AT 0°, AND POLE TILTS DOWN TOWARD 180°. SEE DETAIL SHEET E09. VERIFY AND MODIFY THE MANUFACTURER PART NUMBER TO PROVIDE LUMINAIRES WITH ALL THE FEATURES DESCRIBED.
- 50' TILT DOWN POLE WITH (4) LUMINAIRES. POLE MOUNTED LUMINAIRE SHALL CONSIST OF 150 LED LAMPS, 385W, 800MA 120-277V DRIVER, TYPE 4 DISTRIBUTION AT 90° 135°, AND 315°, TYPE 3 DISTRIBUTION AT 45°. 4000K COLOR TEMPERATURE, 34000 INITIAL LUMENS, BLACK FINISH, AND UPSWEPT ARM SUPPORT. PROVIDE PHOTOCCELL. KIM LIGHTING 3STARX2544K80UVBLUSA25-7, LITHONIA, OR EQUAL. IP66 RATED. PROVIDE FLAT BLACK 50' TILT DOWN POLE LUMINAIRES AT 45°, 90°, 135° AND 315°. HANDHOLE AT 90°, WINCH AT 0°, AND POLE TILTS DOWN TOWARD 180°. SEE DETAIL SHEET E09. VERIFY AND MODIFY THE MANUFACTURER PART NUMBER TO PROVIDE LUMINAIRES WITH ALL THE FEATURES DESCRIBED.

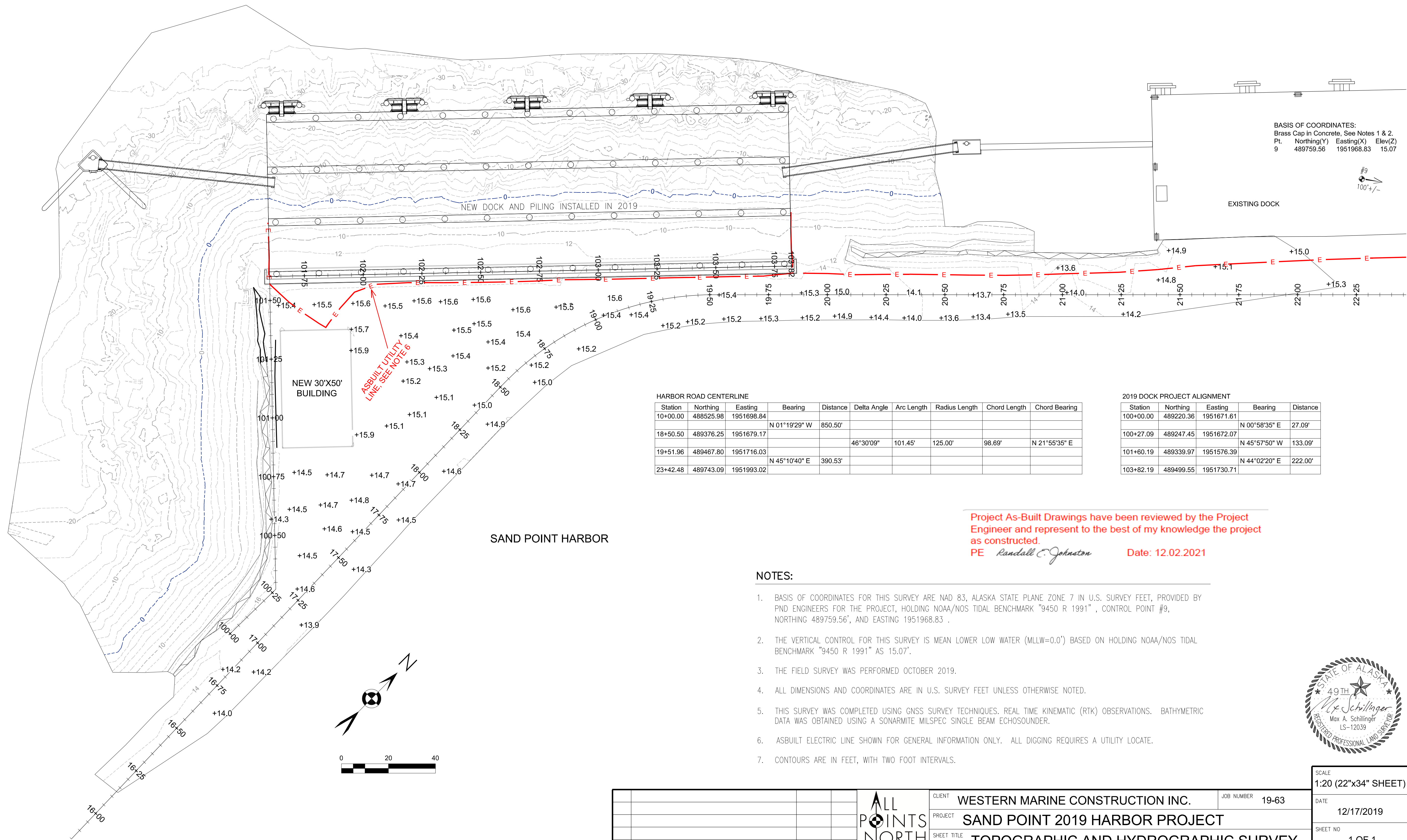
- SEE DOCK LIGHT POLE MOUNTING DETAILS, SHEET E10.
- SEE UPLAND LIGHT POLE MOUNTING DETAILS, SHEET E09.
- SEE ABUTMENT DETAILS, SHEET E11.
- HANDHOLE NEXT TO ABUTMENT, SEE DETAILS SHEET E11 AND E12. PROVIDE A SEPARATE HANDHOLE FOR 2" SPARE CONDUIT (2 ON EACH SIDE OF DOCK).

1 SITE PLAN - ELECTRICAL

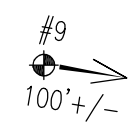
PLANS DEVELOPED BY:
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SAND POINT DOCK REPLACEMENT
SITE PLAN



BASIS OF COORDINATES:
Brass Cap in Concrete, See Notes 1 & 2.
Pt. Northing(Y) Easting(X) Elev(Z)
9 489759.56 1951968.83 15.07



HARBOR ROAD CENTERLINE

Station	Northing	Easting	Bearing	Distance	Delta Angle	Arc Length	Radius Length	Chord Length	Chord Bearing
10+00.00	488525.98	1951698.84							
18+50.50	489376.25	1951679.17	N 01°19'29" W	850.50'					
19+51.96	489467.80	1951716.03			46°30'09"	101.45'	125.00'	98.69'	N 21°55'35" E
23+42.48	489743.09	1951993.02	N 45°10'40" E	390.53'					

2019 DOCK PROJECT ALIGNMENT

Station	Northing	Easting	Bearing	Distance
100+00.00	489220.36	1951671.61		
100+27.09	489247.45	1951672.07	N 00°58'35" E	27.09'
101+60.19	489339.97	1951576.39	N 45°57'50" W	133.09'
103+82.19	489499.55	1951730.71	N 44°02'20" E	222.00'

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.
PE *Randall E. Johnston* Date: 12.02.2021

NOTES:

- BASIS OF COORDINATES FOR THIS SURVEY ARE NAD 83, ALASKA STATE PLANE ZONE 7 IN U.S. SURVEY FEET, PROVIDED BY PND ENGINEERS FOR THE PROJECT, HOLDING NOAA/NOS TIDAL BENCHMARK "9450 R 1991" , CONTROL POINT #9, NORTHING 489759.56', AND EASTING 1951968.83 .
- THE VERTICAL CONTROL FOR THIS SURVEY IS MEAN LOWER LOW WATER (MLLW=0.0') BASED ON HOLDING NOAA/NOS TIDAL BENCHMARK "9450 R 1991" AS 15.07'.
- THE FIELD SURVEY WAS PERFORMED OCTOBER 2019.
- ALL DIMENSIONS AND COORDINATES ARE IN U.S. SURVEY FEET UNLESS OTHERWISE NOTED.
- THIS SURVEY WAS COMPLETED USING GNSS SURVEY TECHNIQUES. REAL TIME KINEMATIC (RTK) OBSERVATIONS. BATHYMETRIC DATA WAS OBTAINED USING A SONARMITE MILSPEC SINGLE BEAM ECHOSOUNDER.
- ASBUILT ELECTRIC LINE SHOWN FOR GENERAL INFORMATION ONLY. ALL DIGGING REQUIRES A UTILITY LOCATE.
- CONTOURS ARE IN FEET, WITH TWO FOOT INTERVALS.



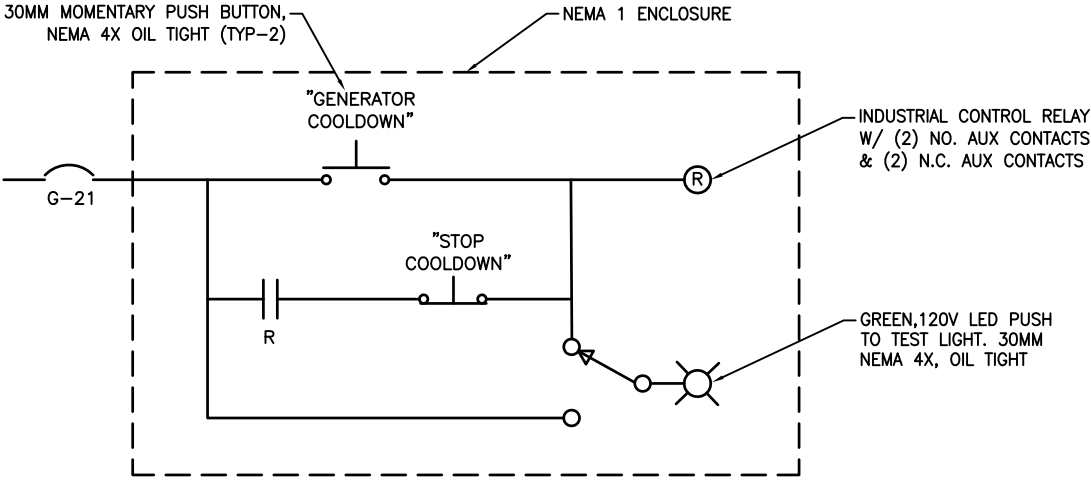
SYM.	REVISIONS	DATE	BY	ALL POINTS NORTH	CLIENT	WESTERN MARINE CONSTRUCTION INC.	
					PROJECT	SAND POINT 2019 HARBOR PROJECT	
					SHEET TITLE	TOPOGRAPHIC AND HYDROGRAPHIC SURVEY	
					JOB NUMBER 19-63		
					SCALE	1:20 (22"x34" SHEET)	
					DATE	12/17/2019	
					SHEET NO	1 OF 1	

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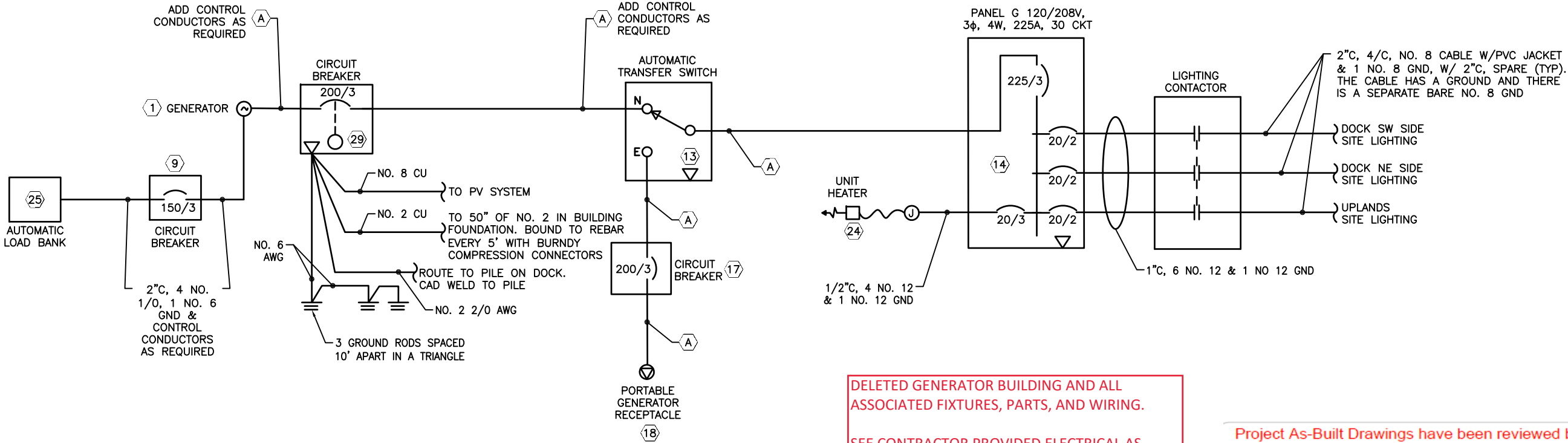
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFHWHY00006	2018	E03	53

NOTES:

- SOME EQUIPMENT ON THIS SHEET HAS A KEYNOTE NUMBER ASSOCIATED WITH IT. THE KEYNOTE NUMBER IS SHOWN INSIDE A HEXAGON (#). SEE THE EQUIPMENT LIST LOCATED ON SHEET E06 FOR A DETAILED DESCRIPTION OF THE EQUIPMENT.
- KEYNOTES WITH AN ALPHA CHARACTER ARE DESCRIBED IN THE SHEET NOTES ON THIS SHEET.
- STUB (2) 2"C SPARE CONDUITS TO DOCK ABUTMENT. ROUTE THROUGH ABUTMENT IN 3" SLEEVES NEXT TO LIGHTING CONDUIT. STUB (1) 2" SPARE CONDUIT TO BUILDING EXTERIOR. TERMINATE IN LB CONDULET. AT 48" AFF.
- COORDINATE WITH DOCK FABRICATOR TO PROVIDE UNISTRUT WHERE REQUIRED AND EVERY 5' ON CENTER ON BOTH SIDES.
- STUB ALL SPARE CONDUIT UP THROUGH THE FLOOR TO 12" AFF. LOCATE BETWEEN THE LIGHTING CONTACTORS AND PANEL G. CAP WITH PULL STRING.



2 GENERATOR COOL DOWN RELAY



DELETED GENERATOR BUILDING AND ALL ASSOCIATED FIXTURES, PARTS, AND WIRING.

SEE CONTRACTOR PROVIDED ELECTRICAL AS-BUILT DRAWINGS.

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston* Date: 12.02.2021

SHEET NOTE:

(A) 2-1/2"C, 4 NO. 4/0 & 1 NO. 2 GND

1 SINGLE LINE DIAGRAM

PLANS DEVELOPED BY:
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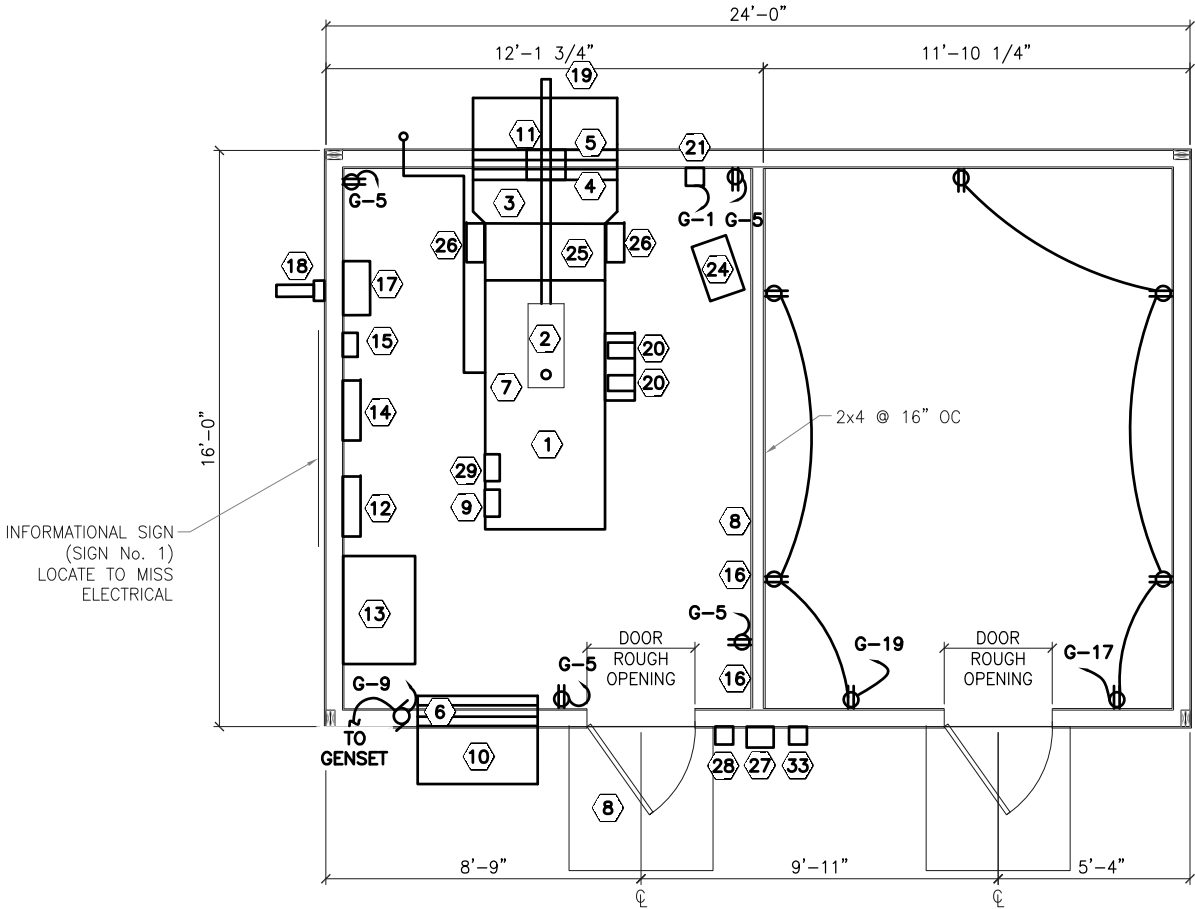
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(907) 465-1763

SAND POINT DOCK REPLACEMENT

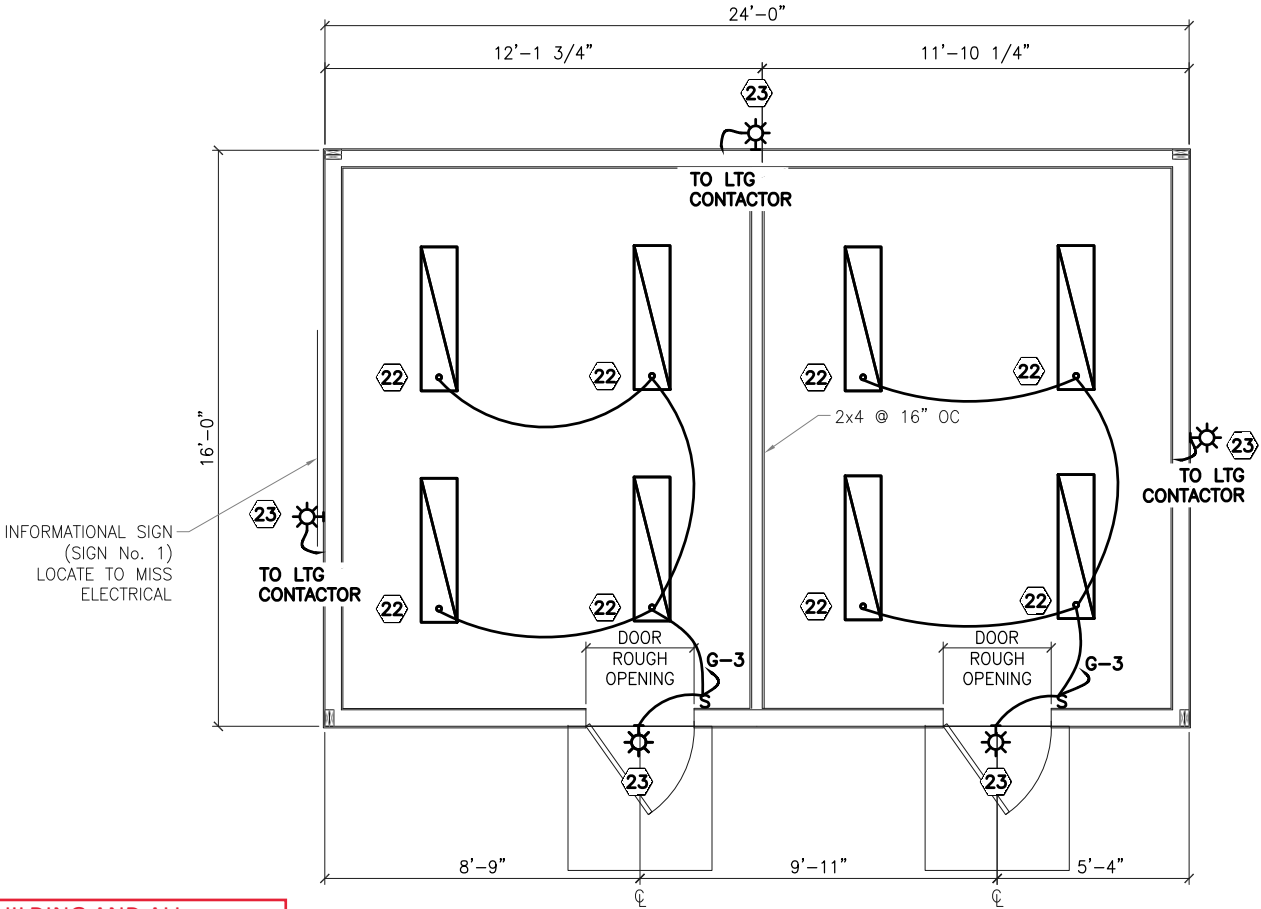
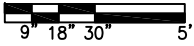
SINGLE LINE DIAGRAM

FILE y:\118 PN&D\46 sand point\working drawings\E04 GEN BLDG.dwg DATE 11/20/2018 11:34 LAYOUT GENERATOR BUILDING FLOOR PLANS MCM CHECKED MCM DRAFTED JRW

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFHWHY00006	2018	E04	53



① GENERATOR BUILDING - EQUIPMENT FLOOR PLAN

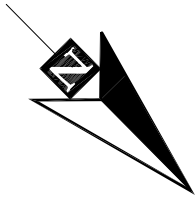


① GENERATOR BUILDING - LIGHTING FLOOR PLAN



DELETED GENERATOR BUILDING AND ALL ASSOCIATED FIXTURES, PARTS, AND WIRING.

SEE CONTRACTOR PROVIDED ELECTRICAL AS-BUILT DRAWINGS.



NOTE:

SOME EQUIPMENT ON THIS SHEET HAS A KEYNOTE NUMBER ASSOCIATED WITH IT. THE KEYNOTE NUMBER IS SHOWN INSIDE A HEXAGON (#). SEE THE EQUIPMENT LIST LOCATED ON SHEET E06 FOR A DETAILED DESCRIPTION OF THE EQUIPMENT.

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021

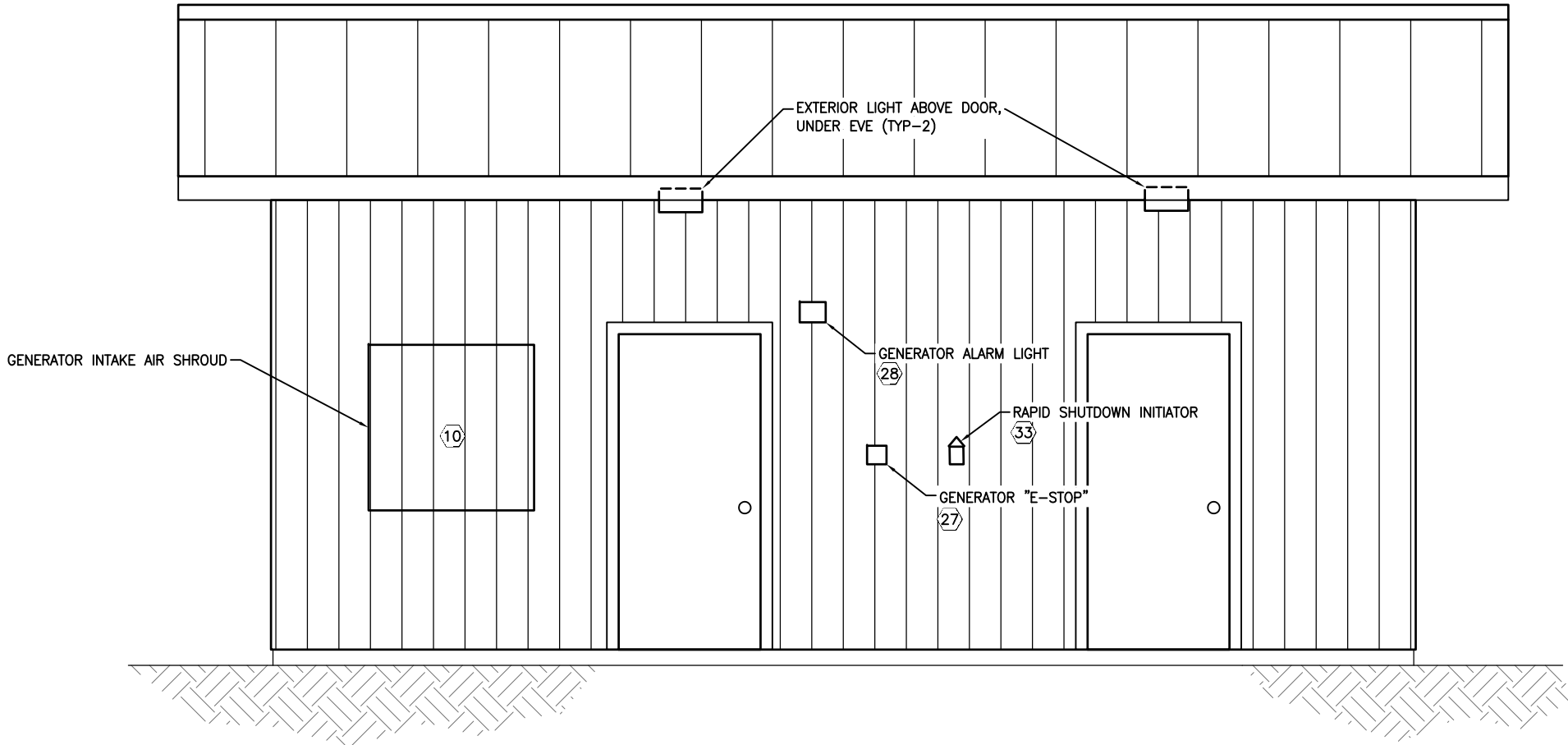
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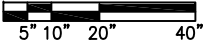
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SAND POINT DOCK REPLACEMENT
GENERATOR BUILDING FLOOR
PLANS

FILE y:\118 PN&D\46 sand point\working drawings\E5 GENERATOR BUILDING ELEVATIONS.dwg DATE 11/20/2018 11:34 LAYOUT E5 DESIGNED MGM CHECKED MGM DRAFTED JRW

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFHWY00006	2018	E05	53



① GENERATOR BUILDING - FRONT ELEVATION



DELETED GENERATOR BUILDNG IN ITS ENTIRETY

NOTE:

SOME EQUIPMENT ON THIS SHEET HAS A KEYNOTE NUMBER ASSOCIATED WITH IT. THE KEYNOTE NUMBER IS SHOWN INSIDE A HEXAGON (#). SEE THE EQUIPMENT LIST LOCATED ON SHEET E06 FOR A DETAILED DESCRIPTION OF THE EQUIPMENT.

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021

PLANS DEVELOPED BY:
MORRIS ENGINEERING
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SAND POINT DOCK REPLACEMENT

GENERATOR BUILDING
ELEVATIONS

FILE y:\118 PN&D\46 sand point\working drawings\E06 EQUIPMENT LIST.dwg DATE 11/20/2018 13:51 LAYOUT EQUIPMENT LIST AND PANELSHEET E06M CHECKED MCM DRAFTED JRW

EQUIPMENT LIST (CONTINUE ON SHEET E13)
(APPLIES TO EQUIPMENT SHOWN ON ALL SHEETS)

- 1
- GENERATOR: 60 KW AT 0.8PF, 120/208V, 3ø, 4 WIRE, TIER 3. PROVIDE WITH 40 KW AUTOMATIC LOAD BANK W/ 5KW LOAD STEPS. PROVIDE THE GENERATOR WITH THREE CUSTOMER CONFIGURABLE RELAYS TO CONTROL THE LOAD BANK AFTER THE GENERATOR HAS RUN FOR 3 MINUTES AND DURING THE COOL DOWN CYCLE. MOUNT LOAD BANK CIRCUIT BREAKER NEXT TO GENERATOR CIRCUIT BREAKER ON THE SIDE OF THE GENERATOR. PROGRAM THE LOAD BANK TO OPERATE WHENEVER GENERATOR IS RUNNING EXCEPT DURING COOL DOWN. RUN CONTROL CONDUCTORS TO GENERATOR RELAYS TO DUMP LOAD BANK DURING COOL DOWN. PROVIDE CTS IN AUTOMATIC TRANSFER SWITCH (ATS) AND ALL NECESSARY CONTROL WIRING TO ATS AND GENERATOR TO START THE LOAD BANK AUTOMATICALLY WHEN THE GENERATOR HAS BEEN RUNNING FOR 3 MINUTES. PROVIDE AUTOMATIC LOAD LEVELING TO MAINTAIN A 35 KW LOAD ON THE GENERATOR WHEN THE LOAD BANK IS ON. DISCONNECT THE LOAD BANK FROM THE GENERATOR DURING THE GENERATOR COOL DOWN. PROVIDE 15 MINUTES MINIMUM OF GENERATOR COOL DOWN INCLUDING COOL DOWN OF LOAD BANK ELEMENTS. PROVIDE ALL CONDUIT, WIRING, AND PROGRAMMING REQUIRED. MOUNT ON (4 MIN) ISOLATION PADS. BOLT TO PAD WITH EARTHQUAKE ANGLE STOPS. THE LOAD BANK SHALL ALSO BE ABLE TO BE MANUALLY CONTROLLED. THE GENERATOR SHALL EITHER BE OPERATED BY AUTOMATIC TRANSFER SWITCH OR MANUALLY PROGRAM AUTOMATIC TRANSFER SWITCH TO OPERATE GENERATOR WHEN IN AUTO.
- 2
- GENERATOR SILENCER AND EXHAUST PIPE. SIZE PIPE AND SILENCER PER GENERATOR MANUFACTURER'S REQUIREMENTS. PROVIDE RESIDENTIAL GRADE SILENCER. SEE DETAIL SHEET E08.
- 3
- EXHAUST COOLING AIR DUCT. MOUNT ONE END TO LOAD BANK. MOUNT THE OTHER END TO THE BACKDRAFT DAMPER AND FIXED LOUVER.
- 4
- BACKDRAFT EXHAUST DAMPER. 48"H X 48"W. MOUNT BASE AT 30". SEE DETAIL SHEET E08. PROVIDE ALUMINUM BACK DRAFT DAMPER BLADES IN AN ALUMINUM FRAME WITH SELF-LUBRICATING CELCON BEARINGS.
- 5
- FIXED BLADE EXHAUST LOUVER. 48"H X 48"W.
- 6
- MOTORIZED INTAKE LOUVER 40"H X 40"W. PROVIDE WITH EXTRUDED ALUMINUM INSULATED BLADES IN AN ALUMINUM FRAME. THE LOUVER SHALL HAVE A MINIMUM R VALUE OF 2.25 WITH SEVERE COLD OPTION. THE LOUVER SEALS SHALL NOT STICK DURING FREEZING CONDITIONS. PROVIDE WITH MOTORIZED ACTUATOR. PROVIDE A 120V MOTOR TO OPERATE THE LOUVER. THE LOUVER SHALL BE SPRING LOADED TO BE CLOSED WITH LOSS OF POWER. POWER THE LOUVER OPEN WHEN THE GENERATOR IS RUNNING. PROVIDE A FUSED CIRCUIT FROM GENERATOR DIRECTLY TO LOUVER MOTOR.
- 7
- SUBBASE FUEL TANK WITH SPILL CONTAINMENT AND DRAIN VALVE. (SIZE FOR 24 HOURS AT FULL LOAD) PROVIDE WITH TANK QUANTITY INDICATOR, LOW FUEL ALARM CONTACTS, AND VENT PIPING. VENT TANK TO OUTSIDE AT 8' AFG. USE BLACK IRON PIPE FOR VENT PIPING. SIZE PER MANUFACTURER RECOMMENDATIONS. PAINT WITH RUST-PROOF PAINT. ROUTE ACROSS FLOOR ON UNISTRUT. FUEL TANK SHALL BE MANUFACTURED BY GENERATOR MANUFACTURER FOR THE MODEL OF GENERATOR PROVIDED.
- 8
- PROVIDE A MANUAL COOL DOWN PUSH BUTTON WITH AN INDUSTRIAL CONTROL RELAY IN A NEMA 1 ENCLOSURE. MOUNT TO WALL ADJACENT TO GENERATOR. USE THE PUSH BUTTON TO ENERGIZE RELAY. USE RELAY TO PUT GENERATOR IN COOL DOWN, I.E. TO DISCONNECT LOAD BANK. SEE DETAIL, SHEET E03.
- 9
- LOAD BANK CIRCUIT BREAKER. MOLDED CASE CIRCUIT BREAKER IN NEMA 1 ENCLOSURE, 150 AMPS, 3 POLE AT 208V. COORDINATE SIZE WITH LOAD BANK MANUFACTURER. MOUNT ON GENERATOR NEXT TO GENERATOR MAIN CIRCUIT BREAKER.
- 10
- INTAKE AIR SHROUD WITH BIRD SCREEN. SEE DETAIL SHEET E08.
- 11
- EXHAUST THIMBLE. SEE DETAIL SHEET E08.
- 12
- LIGHTING CONTACTORS.

DELETED GENERATOR BUILDING AND ALL ASSOCIATED FIXTURES, PARTS, AND WIRING

- 13
- AUTOMATIC TRANSFER SWITCH, MOUNT TOP AT 72" AFG, 225 AMP, 3 POLE WITH NEUTRAL BUSS AND GROUND BUSS. DELAY TRANSITION NEUTRAL.
- 14
- PANEL G, MOUNT TOP AT 72" AFG, 120/208V, 3ø, 4W, 100A, 30 CKT W/ 100A MAIN. BOLT ON CIRCUIT BREAKERS.
- 15
- TRANSIENT VOLTAGE SURGE SUPPRESSION DEVICE (TVSS). MOUNT TOP AT 60" AFF. 80KA SURGE CURRENT (8x20ms) PER PHASE, PROTECTION MODES: L-N, L-L, N-G, L-G. PROVIDE LED INDICATORS AND ALARM CONTROLS.
- 16
- DC EQUIPMENT. SEE SOLAR SYSTEM WIRING SCHEMATIC SHEET E13.
- 17
- PORTABLE GENERATOR CIRCUIT BREAKER. MOUNT AT 48" AFF. MOLDED CASE CIRCUIT BREAKER IN NEMA 1 ENCLOSURE, 200A, 3 POLE AT 208V.
- 18
- STYLE 2, PORTABLE GENERATOR RECEPTACLE. 200A, 208V, PIN & SLEEVE STYLE WITH BACK BOX, ANGLE ADAPTER, AND REVERSE SERVICE INSULATORS. MOUNT AT 48" AFG. PROVIDE MATCHING PLUG WITH 20' OF 4/C, 4/O TYPE G-GC CABLE WIRED TO PLUG. HANG ON WALL ON (3) HOOKS. SPACED APART 3' APART IN WALL TO REDUCE BENDING STRESS ON CABLE.
- 19
- EXHAUST AIR SHROUD, SEE SHEET E08.
- 20
- GENERATOR BATTERY. 12V. SEE KEYNOTE 37, SHEET E13.
- 21
- 12V, 10A, AUTOMATIC BATTERY CHARGER.
- 22
- 4' LENS WRAPAROUND LED 4700 LUMENS, 3500K, COLUMBIA. PROVIDE WITH EM BALLAST WHERE SHOWN (TYP-4)
- 23
- LED COMPACT WALL PACK TYPE IV, 330 LUMENS, 4200K, GRAY WITH PHOTOCELL MOUNT ABOVE DOOR.
- 24
- CEILING MOUNT UNIT HEATER, 208V, 3ø, 3.7 KW, BUILT-IN TWO POLE THERMOSTAT WITH THERMAL CUTOUT. AIR FLOW CAN BE ADJUSTED DOWNWARD.
- 25
- RADIATOR MOUNTED 40 KW AUTOMATIC LOAD BANK. PROVIDE WITH AUTOMATIC LOAD LEVELING. PROVIDE WITH 5 KW STEPS. MOUNT IN EXHAUST DUCT. PROGRAM TO MAINTAIN 35KW ON GENERATOR. DISCONNECT LOAD DURING GENERATOR COOL DOWN CYCLE.
- 26
- AUTOMATIC LOAD BANK CONTROL PANEL. COORDINATE WITH MANUFACTURER TO PROVIDE ONE PANEL ON SIDE SHOWN FOR ADEQUATE WORKING CLEARANCE.
- 27
- GENERATOR EMERGENCY STOP. ACTIVATES GENERATOR MAIN C/B SHUNT TRIP. MOUNT AT 48" AFG.
- 28
- REMOTE GENERATOR ALARM STROBE LIGHT AT 7' AFG. PROVIDE POWER TO STROBE LIGHT FROM PANEL G WITH AN INTERPOSING RELAY IN A NEMA 1 ENCLOSURE ON WALL. CONNECT TO GENERATOR CONTROL PANEL TO ENERGIZE LIGHT WITH GENERATOR ALARM.
- 29
- GENERATOR MAIN CIRCUIT BREAKER WITH SHUNT TRIP MECHANISM: MOLDED CASE CIRCUIT BREAKER IN NEMA 1 ENCLOSURE, 200 AMPS, 3 POLE AT 208V. COORDINATE SIZE WITH MANUFACTURER. ACTIVATE THE SHUNT TRIP WITH A REMOTE MOUNTED, RED MUSHROOM HEAD PUSH BUTTON INSIDE A NEMA 4X ENCLOSURE WITH A HINGED CLEAR COVER AND A PADLOCK HASP. MOUNT THE PUSH BUTTON IN A NEMA 3R JUNCTION BOX INSIDE THE NEMA 4X ENCLOSURE SO THAT THERE IS NO ACCESS TO THE PUSH BUTTON WITHOUT REMOVING A PADLOCK (OWNER SUPPLIED) AND OPENING THE COVER. THE PUSH BUTTON SHALL BE A NEMA 4X, 30 MM, OIL-TIGHT/WATERTIGHT/CORROSION RESISTANT. MOUNT THE PUSH BUTTON ON THE OUTSIDE OF THE BUILDING WHERE SHOWN.

PANEL G			SIZE		VOLTS, PHASE				MOUNTING		MAIN		LOCATION	
			100A		120/208V, 3ø, 4W				SURFACE		50A MAIN		GEN BLDG	
CKT NO.	DESCRIPTION	C/B SIZE	KVA					C/B SIZE	DESCRIPTION	CKT NO.				
			CKT	Aø	Bø	Cø	CKT							
1	BATTERY CHARGER	20/1	0.2	0.2			0.0	30/2	SPARE	2				
3	LIGHTING	—	0.4		0.4		0.0	—	—	4				
5	RECEPTACLES	—	0.8			0.9	0.1	20/1	FUEL TANK & GEN. CONTROLS	6				
7	GEN. PANEL LIGHT	—	0.1	0.2			0.1	20/1	WATER JACKET HEATER	8				
9	INTAKE LOUVER	—	0.1		0.8		0.7	20/2	SW DOCK SITE LIGHTING	10				
11	UNIT HEATER	20/3	1.3			2.0	0.7	—	—	12				
13	—	—	1.3	2.0			0.7	20/2	NE DOCK SITE LIGHTING	14				
15	—	—	1.3		2.0		0.7	—	—	16				
17	SPARE ROOM REC	20/1	0.8			1.5	0.7	20/2	UPLANDS SITE LIGHTING	18				
19	SPARE ROOM REC	20/1	0.6	1.3			0.7	—	—	20				
21	GENERATOR COOL DOWN RELAY	20/1						20/1	SPARE	22				
23	SPARE	20/1								24				
25										26				
27										28				
29										30				
TOTAL CONNECTED LOAD = 11.3 KVA/30 AMPS				3.7	3.2	4.4								

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.
PE *Randall E. Johnston* Date: 12.02.2021

NOTES:

1.
- ALL EQUIPMENT SHALL BE SURFACE MOUNTED. ALL CONDUIT SHALL BE SURFACE MOUNTED.
2.
- ALL ENCLOSURES AND JUNCTION BOXES ON THE BUILDING EXTERIOR SHALL BE NEMA 4X STAINLESS STEEL UNLESS OTHERWISE NOTED.

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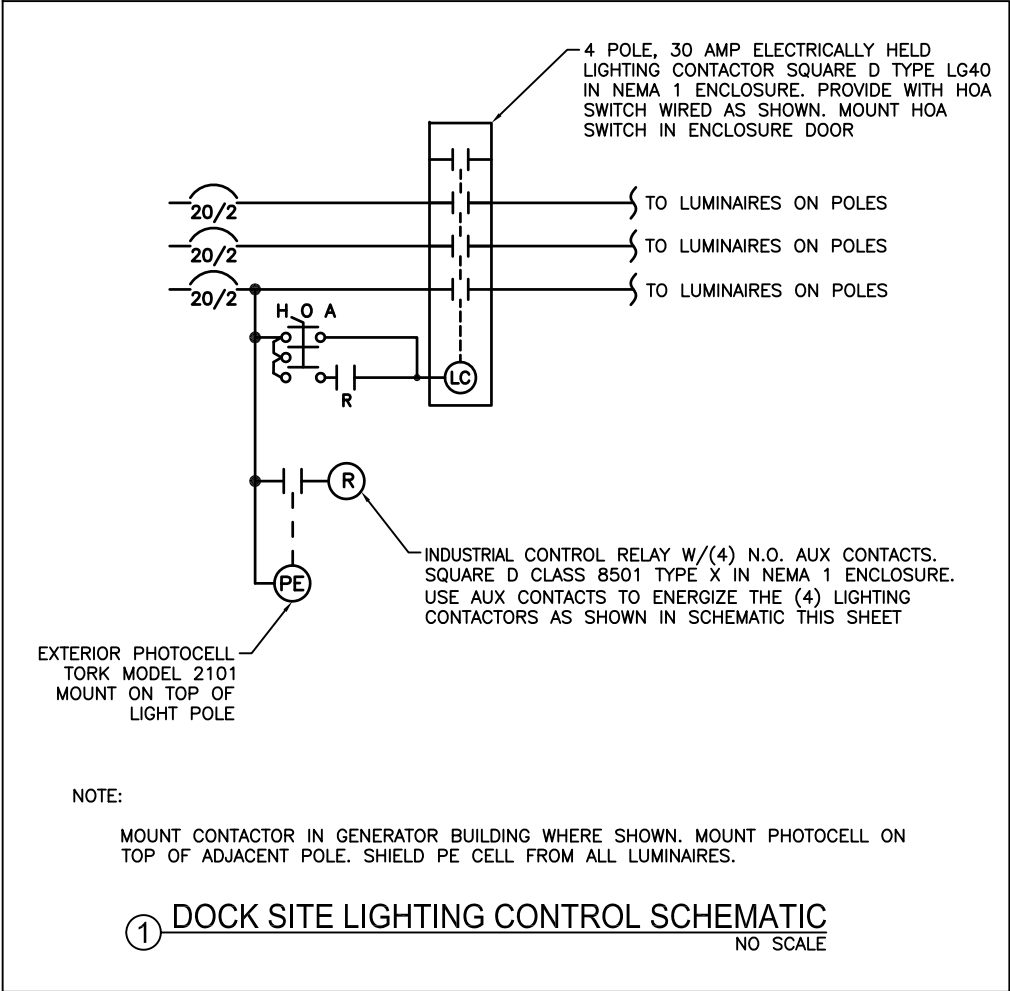


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EQUIPMENT LIST AND PANEL
SCHEDULE

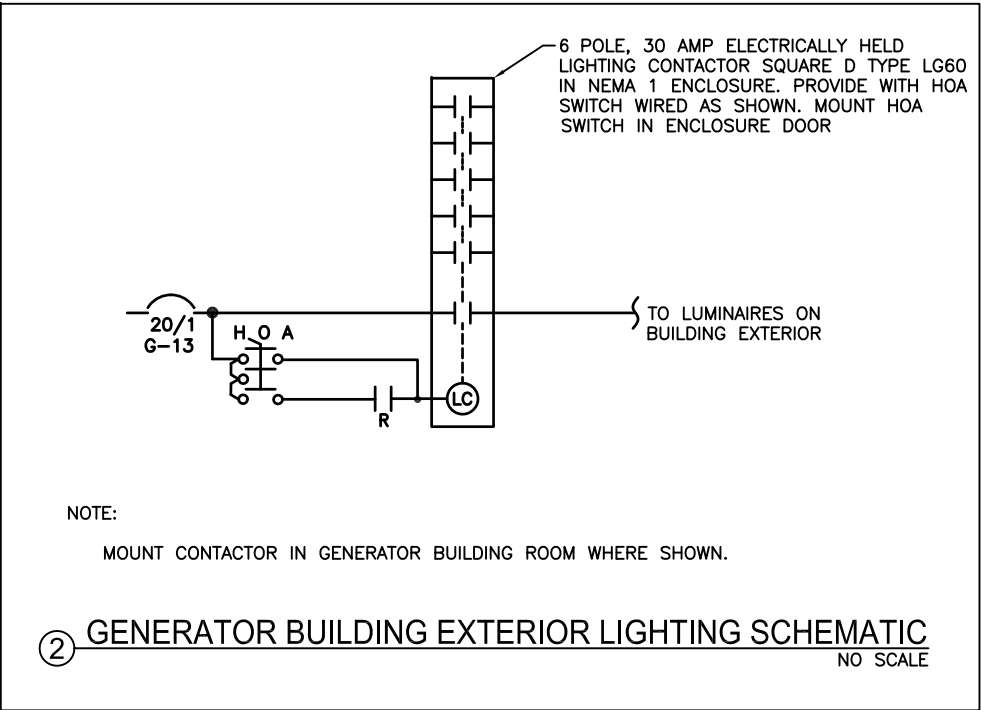
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFHWY00006	2018	E07	53



DELETED GENERATOR BUILDING AND ALL ASSOCIATED FIXTURES, PARTS, AND WIRING.

SEE CONTRACTOR PROVIDED ELECTRICAL AS-BUILT DRAWINGS.



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PE *Randall E. Johnston*

Date: 12.02.2021

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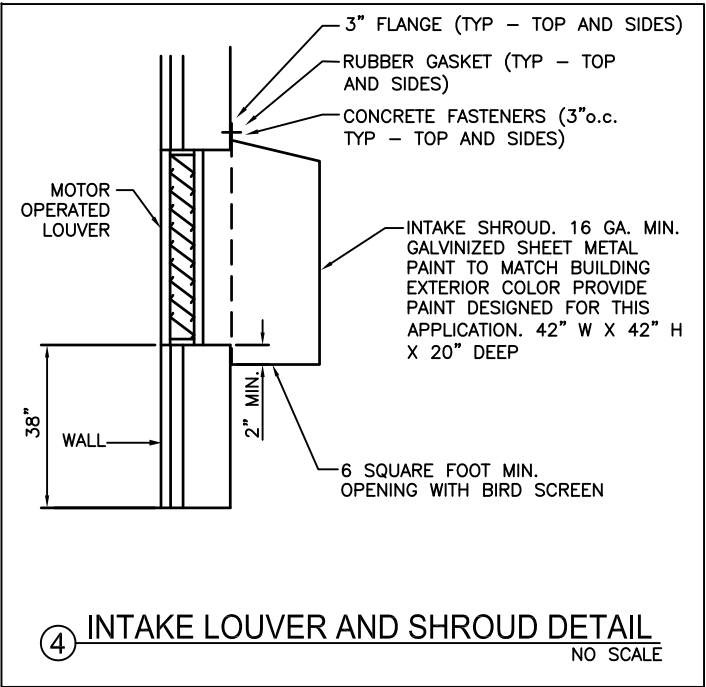
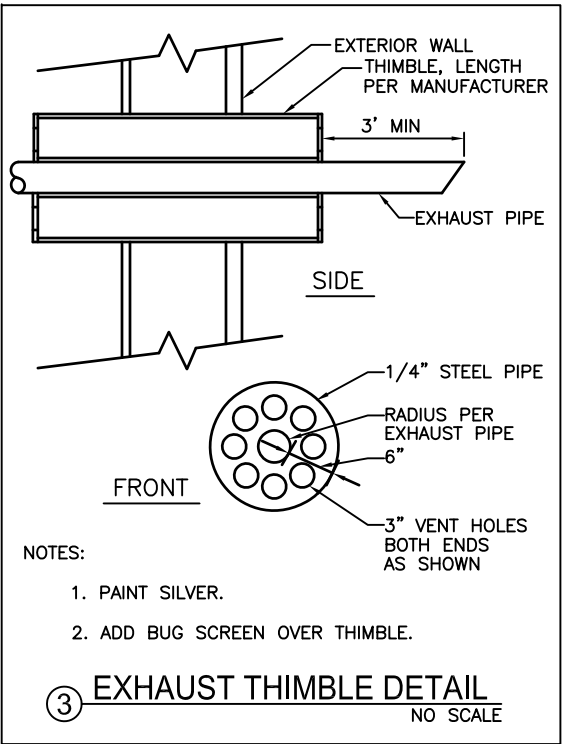
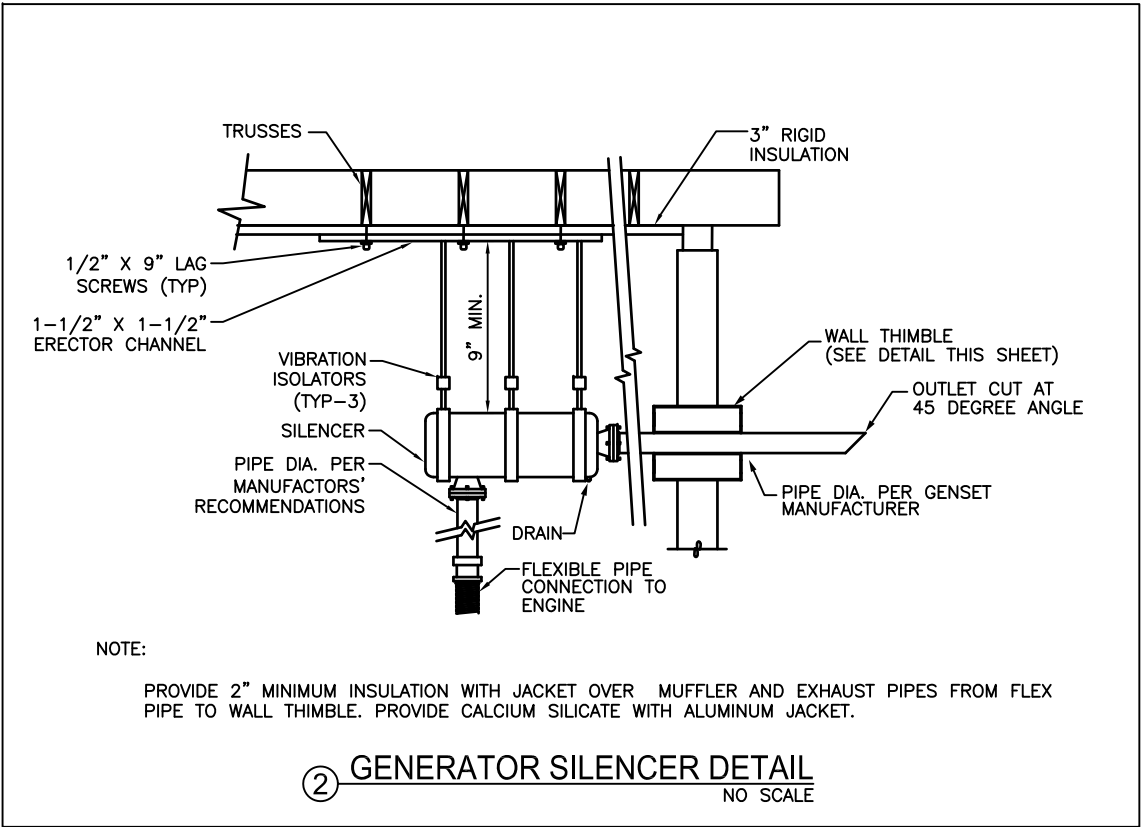
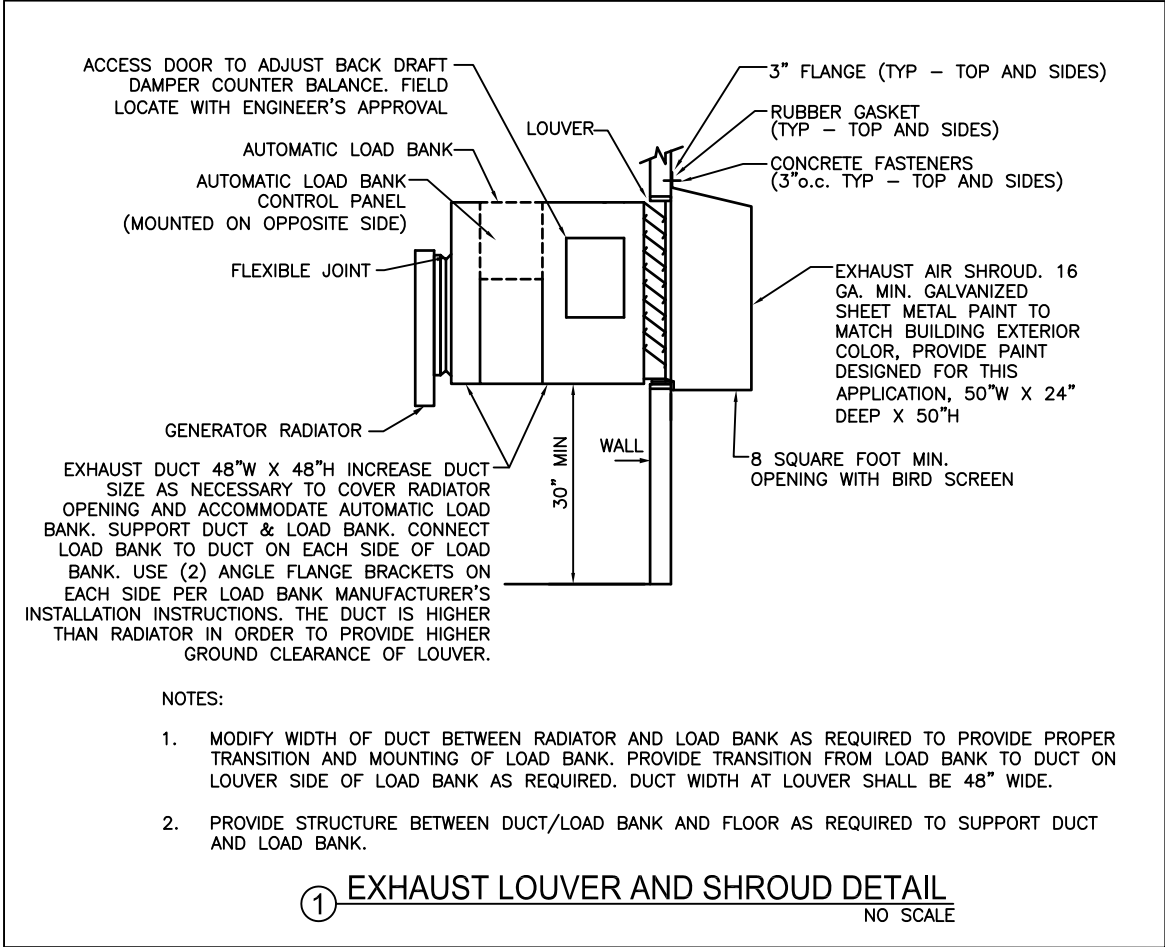
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GENERATOR SCHEMATICS

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			ALASKA	SFHWHY00006	2018	E08	53



DELETED GENERATOR BUILDING AND ALL ASSOCIATED FIXTURES, PARTS, AND WIRING.

SEE CONTRACTOR PROVIDED ELECTRICAL AS-BUILT DRAWINGS.

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021

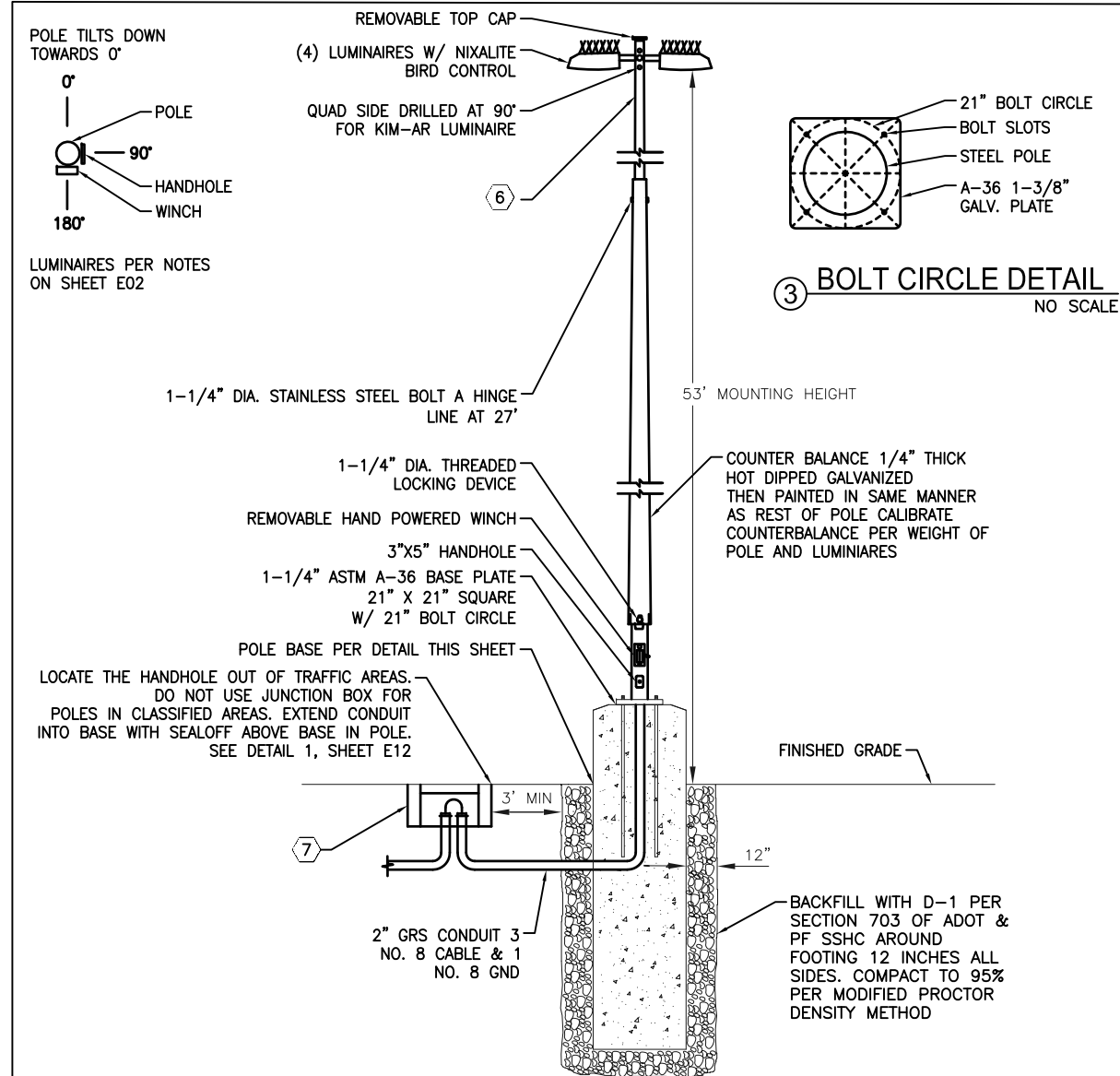
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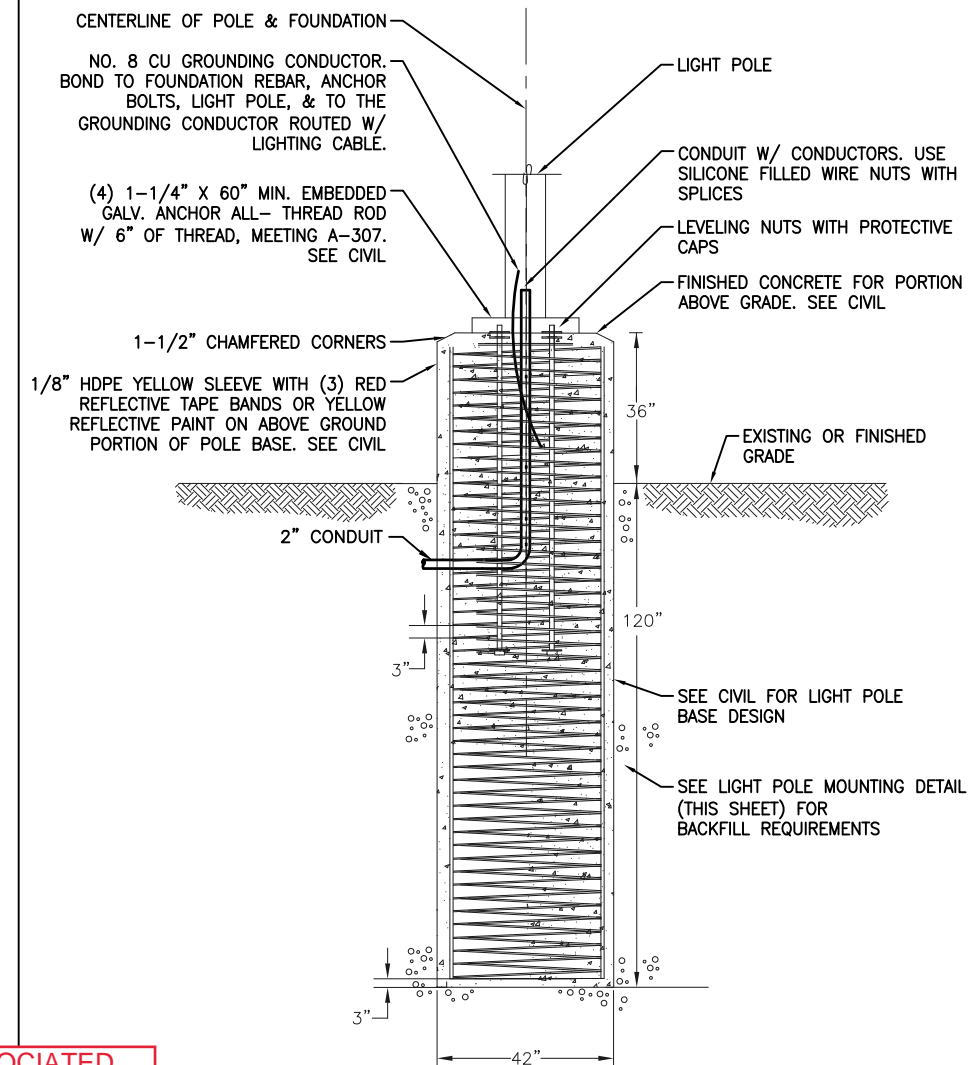
DETAILS

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			ALASKA	SFHwy00006	2018	E09	53



- NOTES:

1. ALL SPLICES SHALL BE IN BASE OF POLE.
2. PROVIDE GROUNDING BUSHINGS ON CONDUIT.
3. PROVIDE FUSE KITS IN EACH POLE BASE.
4. SIZE POLE FOR 130 MPH BASIC WIND SPEED WITH GUST EFFECTS PER AASHTO LTS 6. POLE DIMENSIONS SHOWN ARE THE MINIMUM.
5. THE LUMINAIRE SHALL BE AS SHOWN ON PLANS.
6. SQUARE TAPERED STEEL TUBE, ASTM A-36 1 1/4" WALL LUMINAIRES MOUNTED DIRECT TO POLE. POLE SHALL HAVE A 21" BOLT CIRCLE, POLE SHALL BE HOT DIPPED GALVANIZED THEN PAINTED FLAT BLACK W/ TNESEC PAINTING SYSTEM FOR PAINTING OVER GALVANIZED STEEL. THIS PAINT IS USED TO PREVENT GLARE TO MINIMIZE IMPACT ON AREA RESIDENTS.
7. 16,000 LB DESIGN LOAD, 16"W X 22"L X 12"D, NOMINAL TRAFFIC RATED HANDHOLE W/ BOLT DOWN STEEL COVER W/ RAISED NON-SKID SURFACE OLD CASTLE B1017 BOX AND B1017-51JH COVER OR EQUAL SEE INSTALLATION DETAILS SHEET E12. LOCATE HANDHOLE IN LINE WITH CONDUIT FEEDING POLES IT IS SHOWN 90° OFF IN THIS DETAIL FOR CLARITY. SEE DETAIL 1, SHEET E12.
8. MOUNT POLE TO DOCK WHERE SHOWN ON SITE PLAN. SEE DOCK LIGHT POLE DETAILS SHEET E10.



UPLAND LIGHT POLE AND ALL ASSOCIATED
WIRING DELETED IN ITS ENTIRETY

② UPLAND LIGHT POLE BASE DETAIL
NO SCALE

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021

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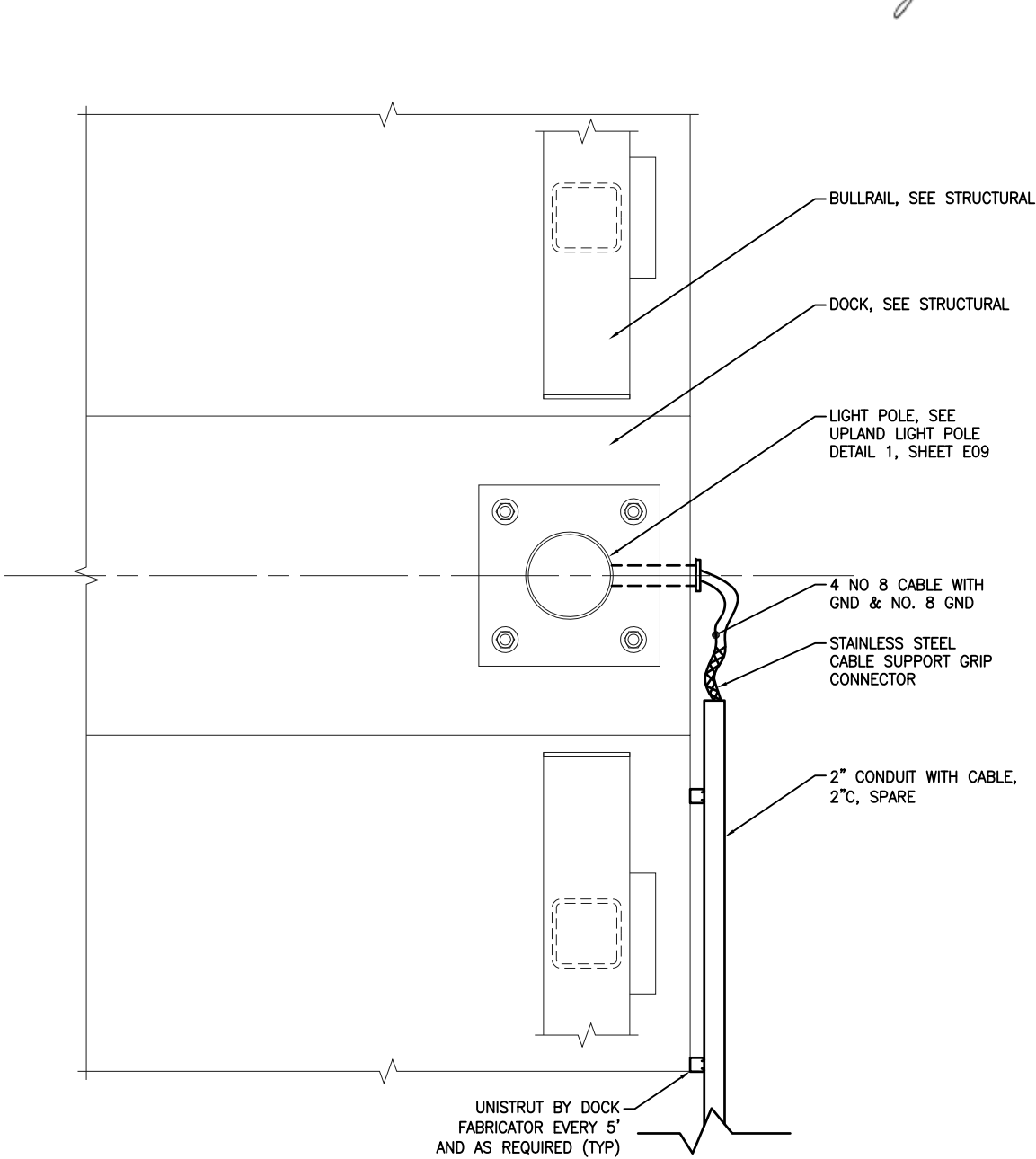
UPLAND LIGHT POLE DETAIL

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

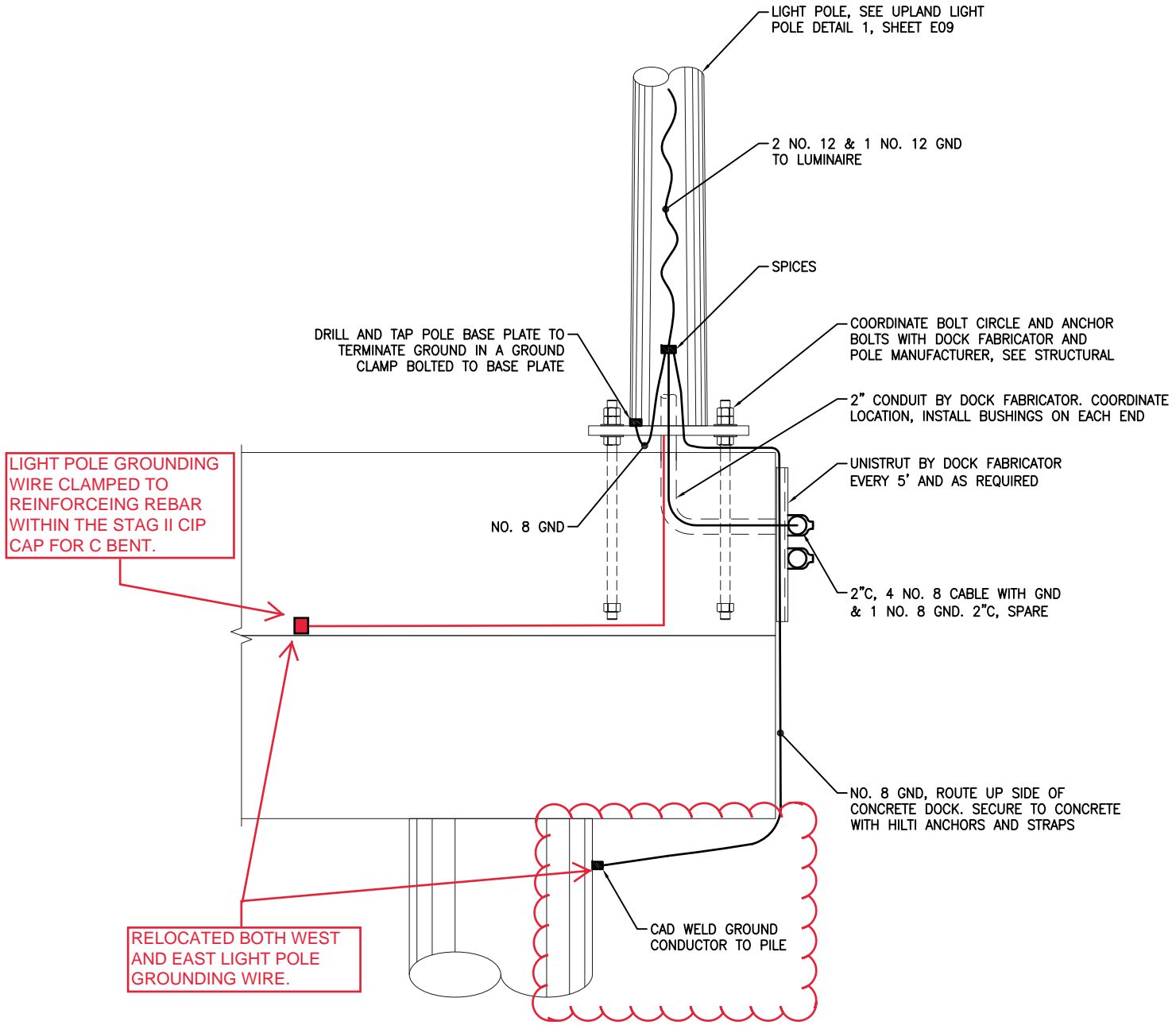
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① DOCK LIGHT POLE MOUNTING DETAIL
NO SCALE



② DOCK LIGHT POLE BASE DETAIL
NO SCALE

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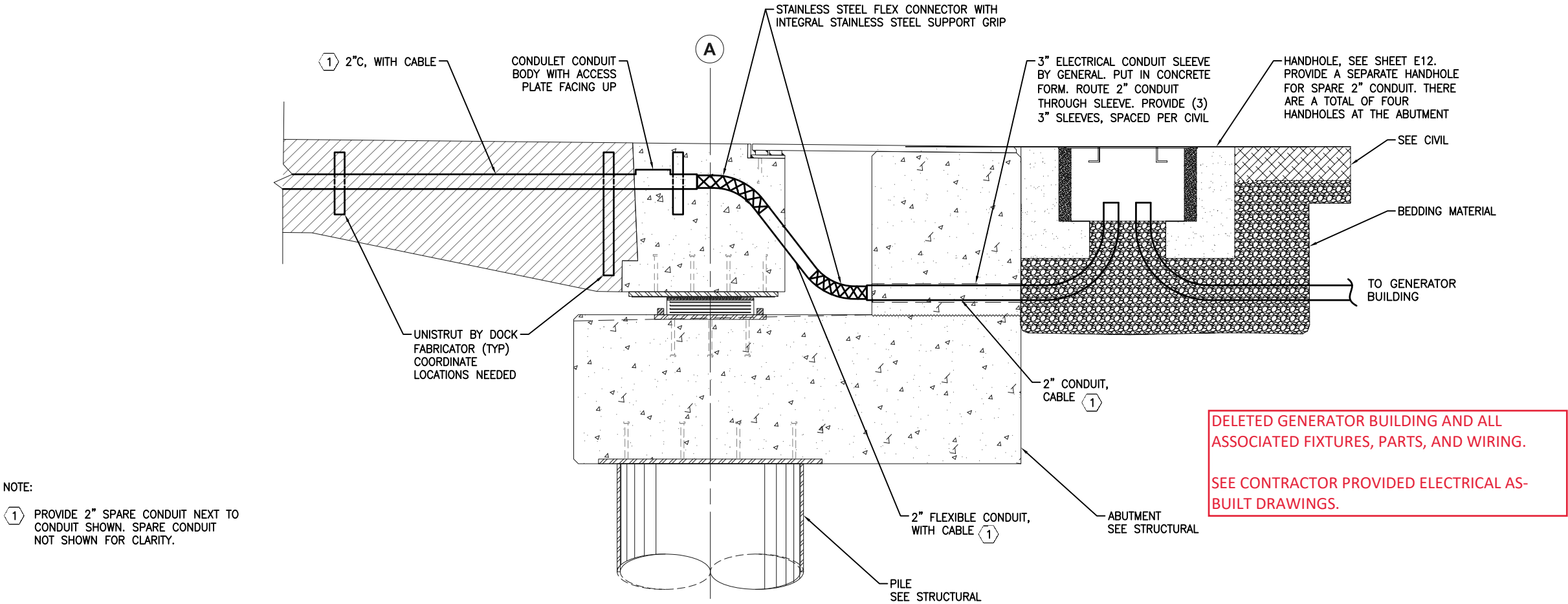


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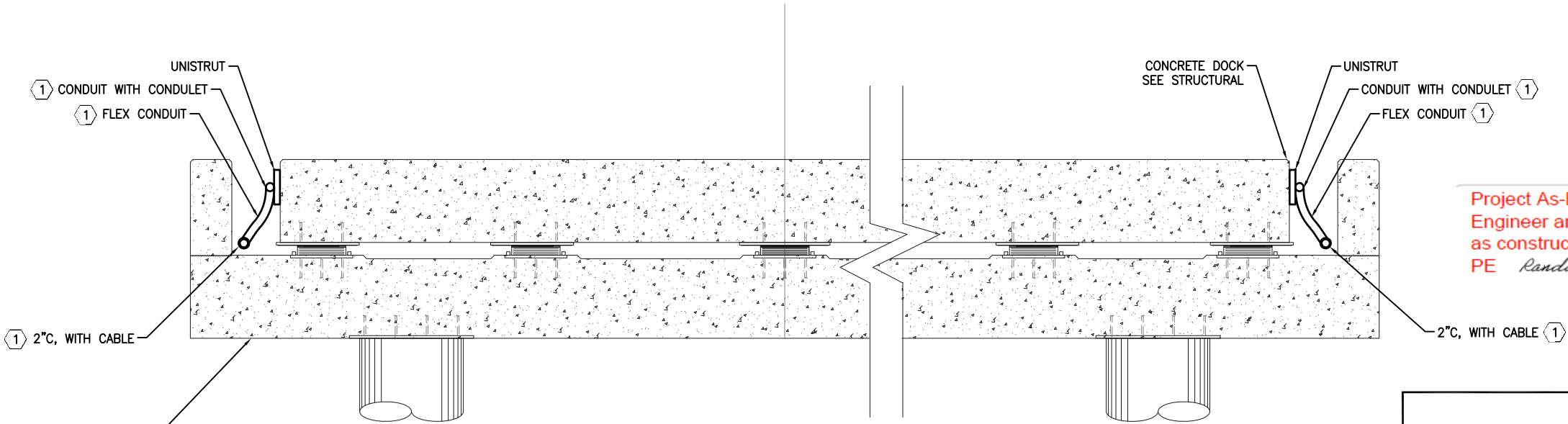
DOCK LIGHT POLE DETAIL

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1 ABUTMENT ELEVATION - CONDUIT ROUTING DETAIL
NO SCALE



2 ABUTMENT SECTION - CONDUIT ROUTING DETAIL
NO SCALE

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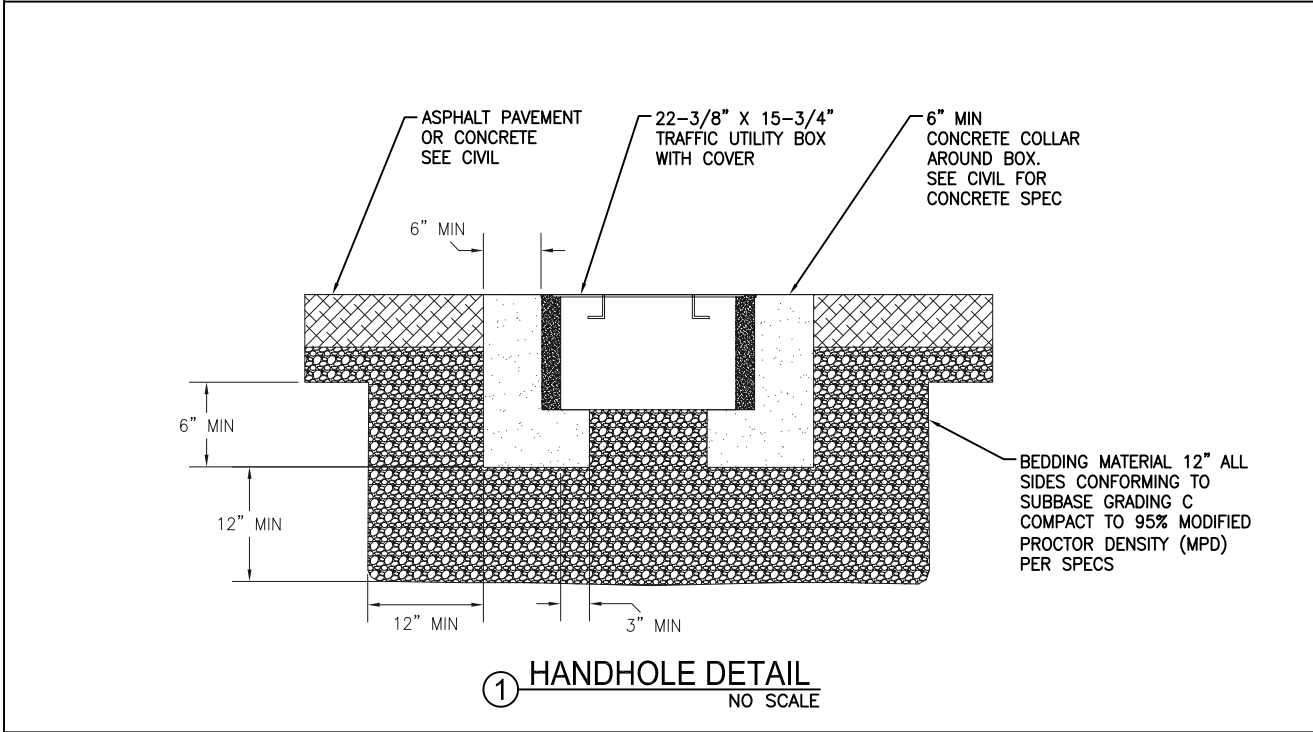


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ABUTMENT DETAILS

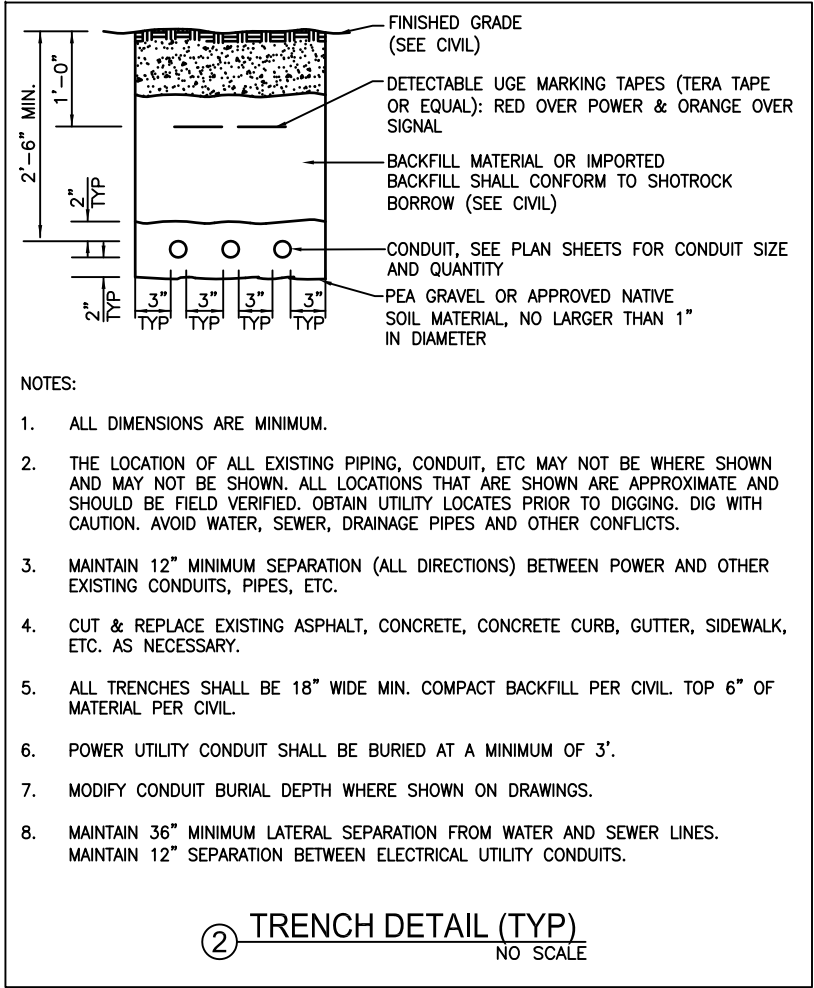
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFHWHY00006	2018	E12	53



DELETED GENERATOR BUILDING AND ALL ASSOCIATED FIXTURES, PARTS, AND WIRING.

SEE CONTRACTOR PROVIDED ELECTRICAL AS-BUILT DRAWINGS.



Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021

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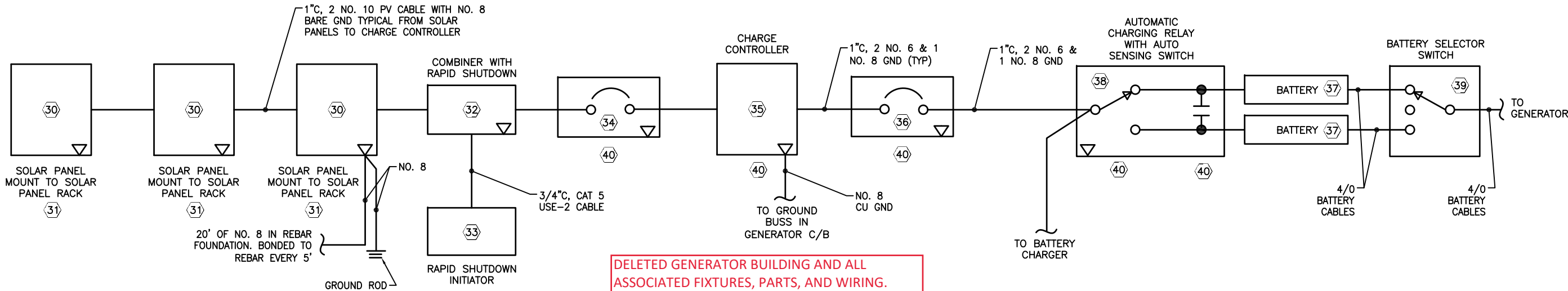
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HANDHOLE AND TRENCH DETAIL

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EQUIPMENT LIST CONTINUED FROM E06:

- 30

SOLAR PANEL. 295 WATTS, 32.5V OPTIMAL OPERATING VOLTAGE AT 85°C, 39.7V OPEN CIRCUIT VOLTAGE. MONO CRYSTALLINE PANEL. CANADIAN SOLAR, SOLAR WORLD, ITEK ENERGY, OR EQUAL.
- 31

SOLAR PANEL RACK. MOUNT PANELS TO RACK. RACK SHALL BE DESIGNED FOR METAL ROOFING (SPECIFIC TO TYPE INSTALLED). RACK AND PANELS SHALL BE RATED FOR 130 MPH WINDS. IRON RIDGE, UNIRAC, EVEREST, OR EQUAL. ATTACH TO ROOF PER MANUFACTURER'S INSTRUCTIONS. GROUND RACK TO EQUIPMENT GROUNDING CONDUCTOR AND TO BOTH A GROUND ROD WITH NO. 8 AWG AND 20' OF NO. 8 GROUNDING CONDUCTOR IN REBAR FOUNDATION.
- 32

COMBINER WITH RAPID SHUTDOWN. PROVIDE WITH 20 AMP FUSES. HANDLE LOCKABLE IN OFF POSITION, USE WITH RAPID SHUTDOWN INITIATOR. MEETS NATIONAL ELECTRICAL CODE (NEC) 690.12 80A. 150V DC. NEMA 3R. MOUNT ON ROOF RACK WITH UNISTRUT NEXT TO SOLAR PANELS. MIDNIGHT SOLAR, OUTBACK POWER, OR EQUAL.
- 33

RAPID SHUTDOWN INITIATOR. MOUNT TO EXTERIOR OF GENERATOR BUILDING AT 48" AFG. PROVIDE WITH BATTERY BACKUP. MEETS NEC 690.12. NEMA 3R. MOUNT INSIDE NEMA 4X ENCLOSURE WITH CLEAR WINDOW IN PADLOCKABLE DOOR. PROVIDE SIGNAGE COMPLYING WITH NEC 690.56. MIDNIGHT SOLAR, OUTBACK POWER, OR EQUAL.
- 34

15A, 150V DC GROUND FAULT CIRCUIT BREAKER WITH PANEL MOUNT LUGS IN NEMA 1 ENCLOSURE. PROVIDE WITH MARKING PER NEC 690.13. MIDNIGHT SOLAR, OUTBACK POWER OR EQUAL.
- 35

CHARGE CONTROLLER. 60A, 150V. MAXIMUM POWER POINT TRACKING (MPPT) DC TO DC CONVERTER WITH MANUAL AND AUTOMATIC EQUALIZE CYCLES. BUILT IN ARC FAULT AND DC GROUND FAULT PROTECTION. ADJUSTABLE ABSORB AND FLOAT VOLTAGE SETTINGS. SET PER BATTERY MANUFACTURER SPECS. PROVIDE IN ENCLOSURE WITH BACK LIT DISPLAY. MIDNIGHT SOLAR, OUTBACK POWER, OR EQUAL.
- 36

80A, 150V DC OVERCURRENT AND GROUND FAULT CIRCUIT BREAKER WITH PANEL MOUNT LUGS IN A NEMA 1 ENCLOSURE. MIDNIGHT SOLAR, OUTBACK POWER, OR EQUAL.
- 37

GENERATOR BATTERY
8D SIZE
12 VOLT
578 MINUTES AT 25 AMPS
145 MINUTES AT 75 AMPS
214 AMP HOUR AT 5 HOUR RATE
260 AMP HOUR AT 20 HOUR RATE
1830 CA AT 32°C
1525 CCA AT 0°C
- 38

AUTOMATIC CHARGING RELAY, 12V, 120A. AUTOMATICALLY COMBINES BATTERIES DURING CHARGING, ISOLATES BATTERIES WHEN DISCHARGING AND WHEN STARTING GENERATOR.
- 39

3 POSITION BATTERY SELECTOR SWITCH 350A CONTINUOUS RATING, 32V DC, MOUNT TO WALL ADJACENT GENERATOR.
- 40

MOUNT EQUIPMENT NEXT TO EACH OTHER IN GENERATOR ROOM. SEE NOTE 16, SHEET E06.

NOTE:

PROVIDE A PV SYSTEM PER SECTION 690 OF THE NEC. PROVIDE IDENTIFICATION, MARKING, SIGNAGE AND LABELING PER NEC 690.

1 PHOTOVOLTAIC (PV) SYSTEM WIRING SCHEMATIC

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021

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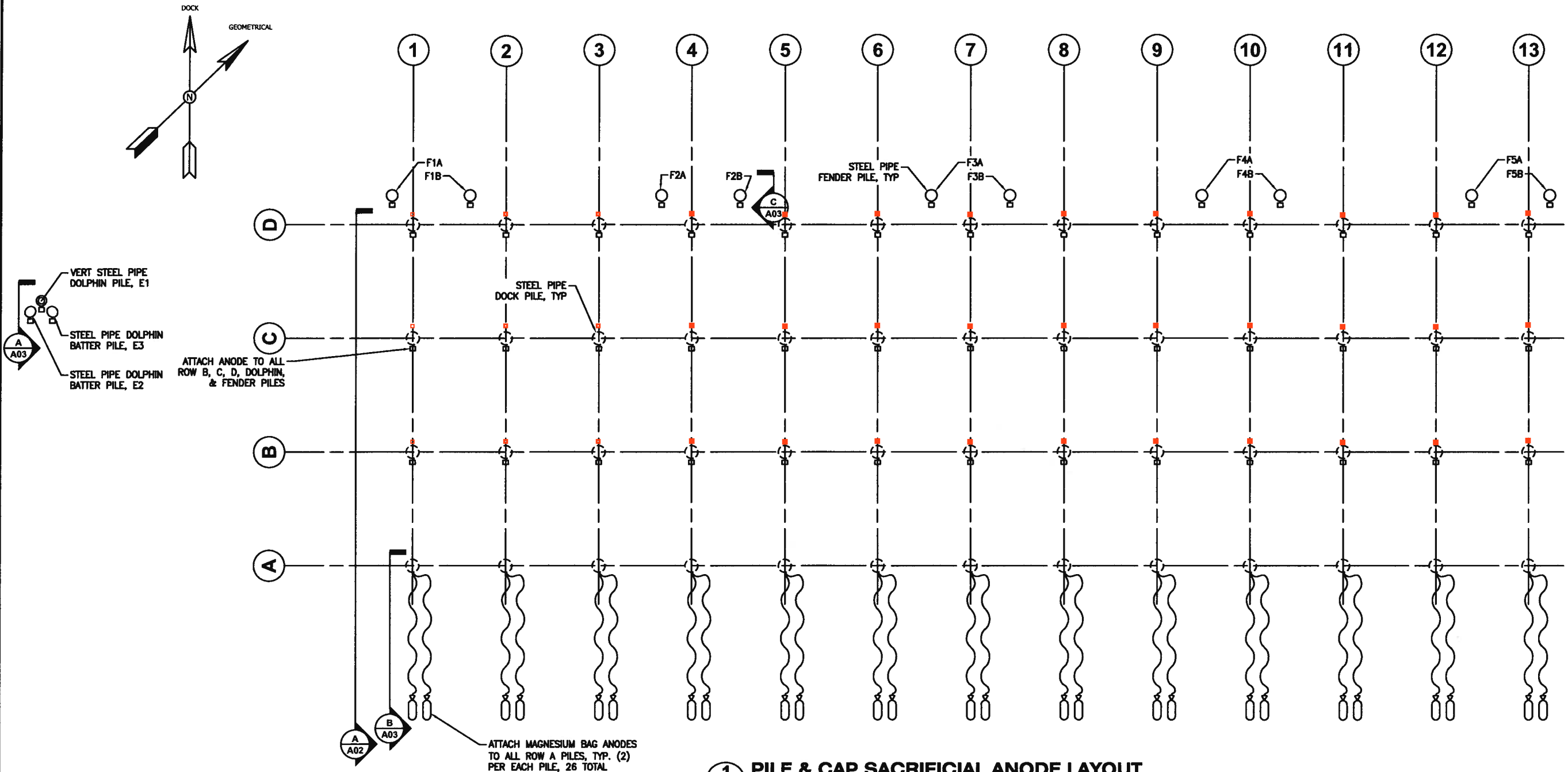


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SAND POINT DOCK REPLACEMENT

PHOTOVOLTAIC SYSTEM WIRING
SCHEMATIC

FILE DATE LAYOUT DESIGNED MM CHECKED BM DRAFTED DH

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SFWHY00006	2018	A01	53



1 PILE & CAP SACRIFICIAL ANODE LAYOUT

B, C, and D anodes moved to Northern face of pilings.

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.
PE *Randall E. Johnston* Date: 12.02.2021

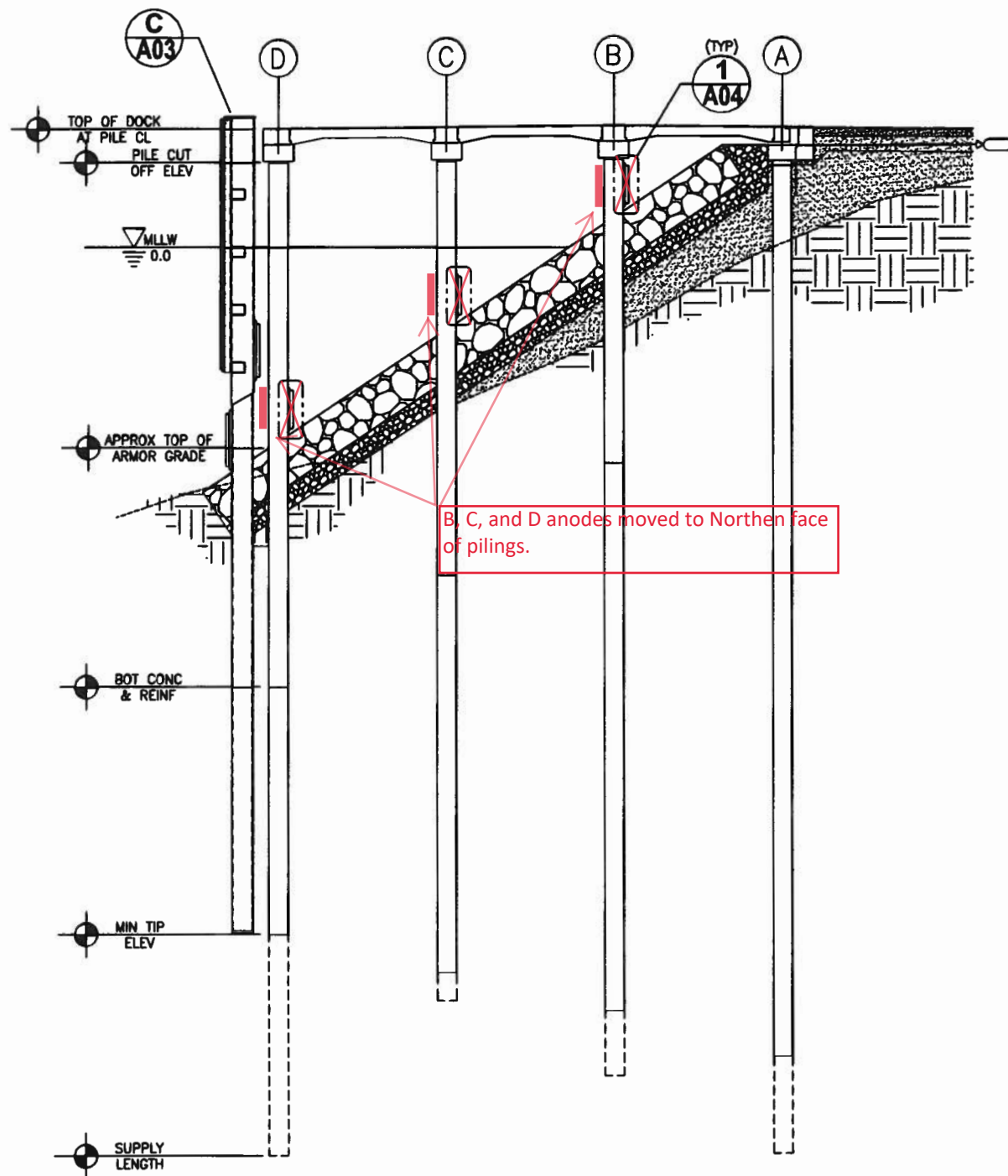


PLANS DEVELOPED BY:
TAKU ENGINEER
406 W. FIREWEED LN.
907-562-1284
AK LIC# 708066

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
6880 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763
**SAND POINT DOCK REPLACEMENT
PILE & CAP SACRIFICIAL
ANODE LAYOUT**

FILE LAYOUT DESIGNED MM CHECKED BM DRAFTED DH

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ANODE ELEVATIONS

LOCATION	BENT D	BENT C	BENT B	BENT A	FENDER (PIN)	DOLPHIN
TOP OF DOCK	15.52	15.74	15.96	15.74	-	-
PILE CUT OFF	11.10	11.32	11.54	11.35	-	-
APPROX GRADE	-25.4	-10.8	3.9	13.3	-	-
BOT CONC	-21.9	-21.7	-21.5	N/A	-	-
MIN TIP	-90	-95	-100	-106	-	-
TOP OF ANODE	-18	-7.8	6.9	-	-18	-18

A
A01 ANODE ELEVATIONS

Sand Point DOT City Dock Anode Schedule

Location		Pile Diameter (in)	Anode Weight (LBS)	Anode Count
Dock	A1	30	48	2
	A2	30	48	2
	A3	30	48	2
	A4	30	48	2
	A5	30	48	2
	A6	30	48	2
	A7	30	48	2
	A8	30	48	2
	A9	30	48	2
	A10	30	48	2
	A11	30	48	2
	A12	30	48	2
	A13	30	48	2
	B1	30	175	1
	B2	30	175	1
	B3	30	175	1
	B4	30	175	1
	B5	30	175	1
	B6	30	175	1
	B7	30	175	1
	B8	30	175	1
	B9	30	175	1
	B10	30	175	1
	B11	30	175	1
	B12	30	175	1
	B13	30	175	1
	C1	30	175	1
	C2	30	175	1
	C3	30	175	1
	C4	30	175	1
	C5	30	175	1
C6	30	175	1	
C7	30	175	1	
C8	30	175	1	
C9	30	175	1	
C10	30	175	1	
C11	30	175	1	

Sand Point DOT City Dock Anode Schedule

Location		Pile Diameter (in)	Anode Weight (LBS)	Anode Count
Dock	C12	30	175	1
	C13	30	175	1
	D1	30	313	1
	D2	30	313	1
	D3	30	313	1
	D4	30	313	1
	D5	30	313	1
	D6	30	313	1
	D7	30	313	1
	D8	30	313	1
	D9	30	313	1
	D10	30	313	1
	D11	30	313	1
D12	30	313	1	
D13	30	313	1	
Pin Piles	F1A	24	313	1
	F1B	24	313	1
	F2A	24	313	1
	F2B	24	313	1
	F3A	24	313	1
	F3B	24	313	1
	F4A	24	313	1
	F4B	24	313	1
F5A	24	313	1	
F5B	24	313	1	
Fender	1	NA	313	2
	2	NA	313	2
	3	NA	313	2
	4	NA	313	2
	5	NA	313	2
Dolphin	E1	24	313	1
	E2	24	313	1
	E3	24	313	1
TOTAL 48LB Anodes				26
TOTAL 175LB Anodes				26
TOTAL 313LB Anodes				36
TOTAL ANODES				88

ANODE SCHEDULE

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PE *Randall E. Johnston*

Date: 12.02.2021

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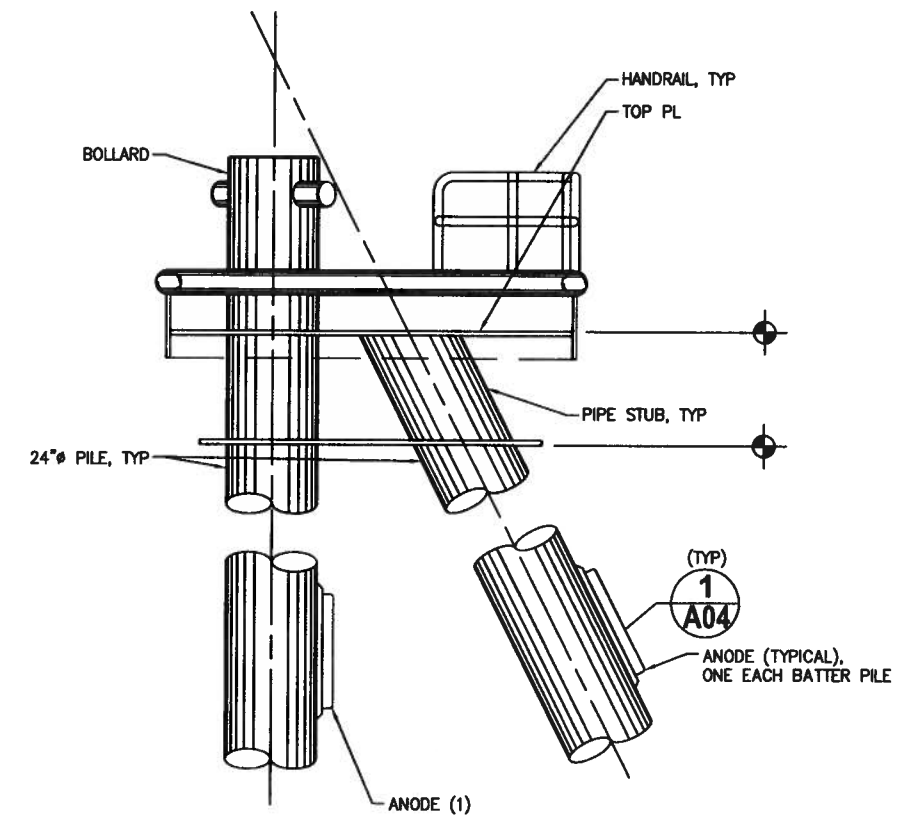


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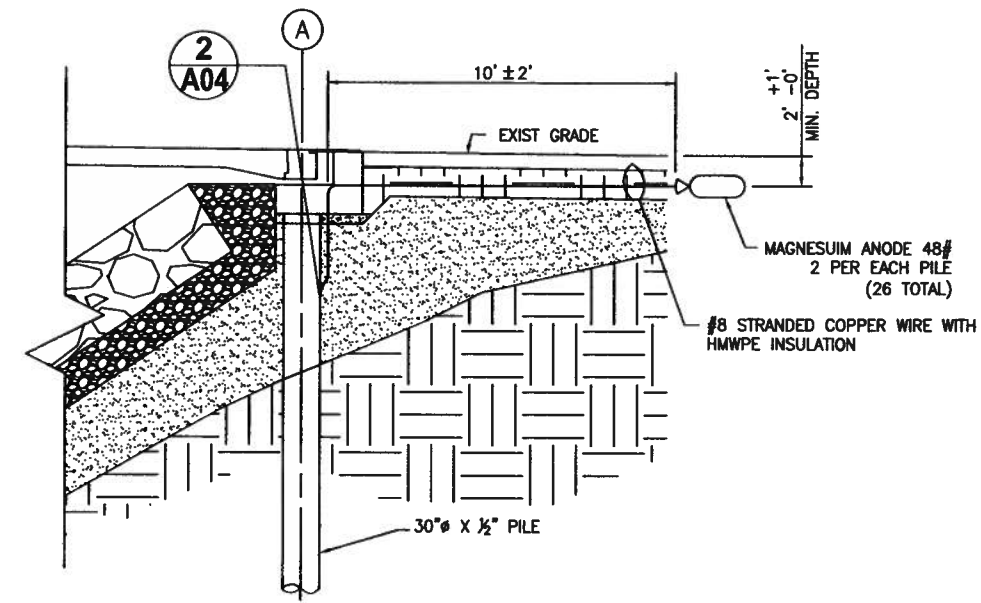
SAND POINT DOCK REPLACEMENT
PILE PROFILE &
ANODE SCHEDULE

FILE DATE LAYOUT DESIGNED MM CHECKED BM DRAFTED DH

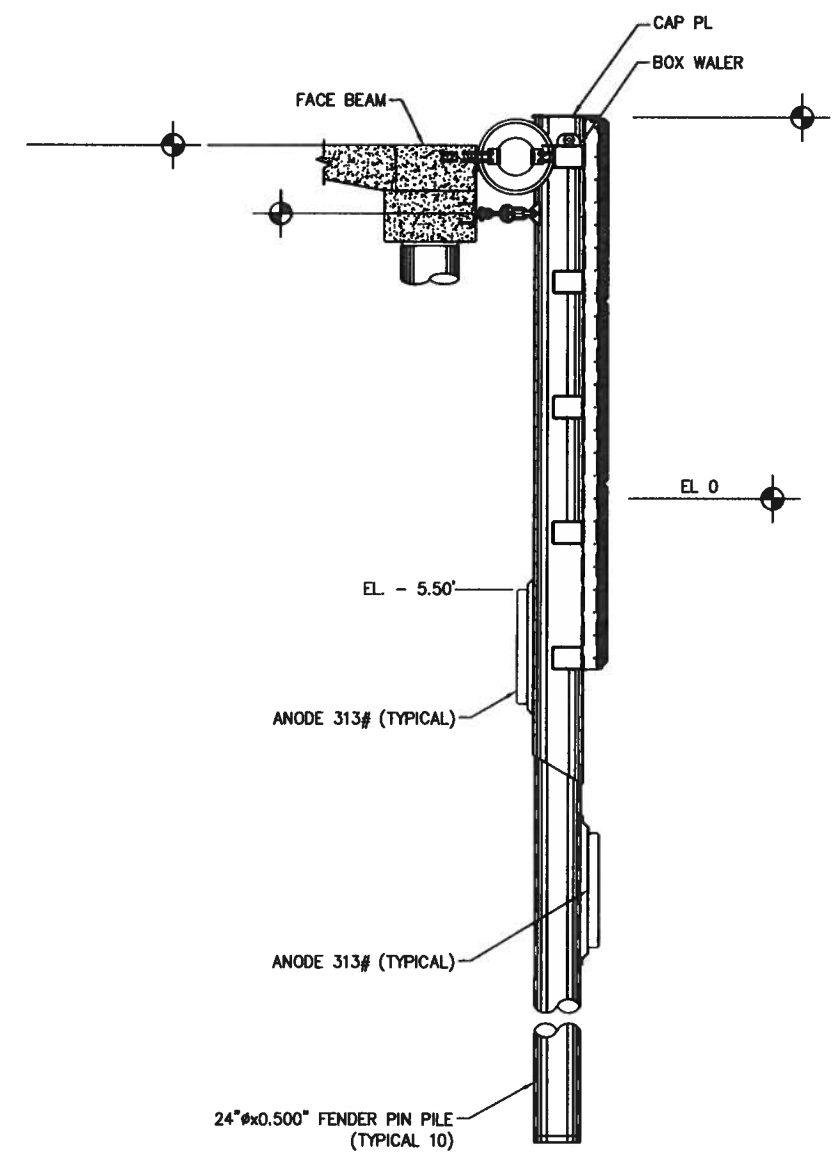
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A DOLPHIN ELEVATION
A01



B ROW A ELEVATION
A01



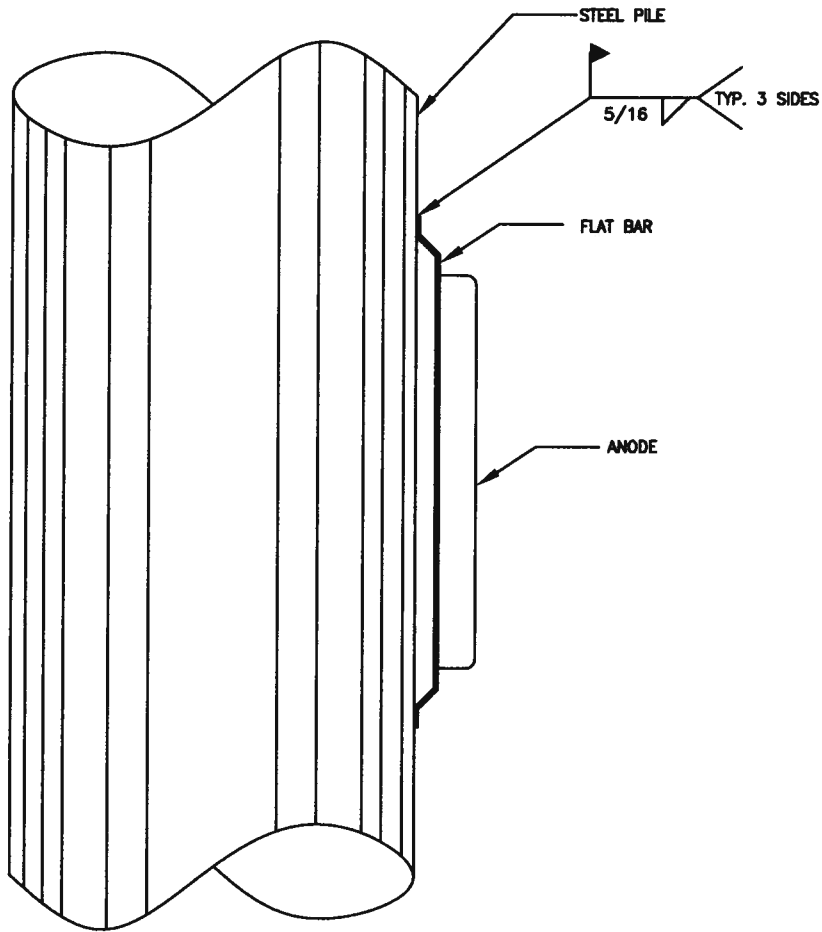
C FENDER SECTION
A01

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.
PE *Randall E. Johnston* Date: 12.02.2021

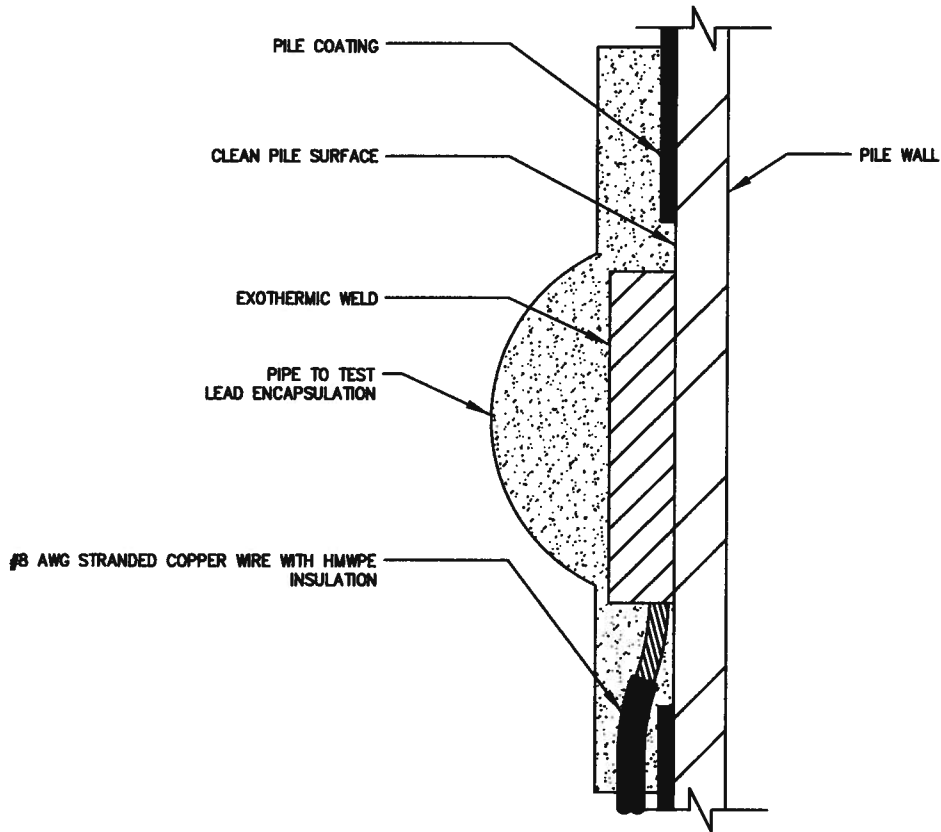
PLANS DEVELOPED BY: TAKU ENGINEER 406 W. FIREWEED LN. 907-562-1284 AK. LIC# 708066		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 6860 GLACIER HIGHWAY, JUNEAU, AK 99801 (907) 485-1783 SAND POINT DOCK REPLACEMENT FENDER, DOLPHIN, & ROW A DETAILS
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FILE DATE LAYOUT DESIGNED MM CHECKED BM DRAFTED DH

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
				SFWY00006	2018	A04	53



1
A02 & A03
ROWS B - D, DOLPHIN, & FENDER PILE
ANODE ATTACHMENT DETAIL, TYPICAL



2
A03
ROW A CONNECTION
DETAIL

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.

PE *Randall E. Johnston*

Date: 12.02.2021

PLANS DEVELOPED BY:
TAKU ENGINEER
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AK LIC# 708086



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
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6880 GLACIER HIGHWAY, JUNEAU, AK 99801
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SAND POINT DOCK REPLACEMENT
ANODE CONNECTION
DETAILS